## AUTHORS' OF

## ABSTRACTS A and B. 1929.

An asterisk denotes a previous abstract. Patents are marked (P.)

Anonymous.

influence of acids and alkalis on the formation of mucilage from cellulose, B., 12.

surface increase in mists from the "Schlick" spray, B., 229. chemical and ballistic stabilities of BAm and BD powders. I.,

new Austrian specification for [testing] natural asphalts and petroleum asphalts, B., 584.

manufacture of domestic coke in the coke oven, B., 742.

standard method for the analysis of soap, B., 785.

apparatus for the determination of carbon dioxide in water supersaturated with the gas, B., 1043.

- A. C. Spark Plug Co., [bag] filters, (P.), B., 501. testing and indicating the condition of filters, (P.), B., 627. means for indicating the condition of [automotive] filters, (P.), B., 802
- A. C. Spark Plug Co. See also Blair, M.L., and McDougal, T.G. Aardal, A.A., effect of ultra-violet light on the dielectric properties of crystals, A., 155.
- Aarnio, B., alterations in the degree of acidity of soils by drying the samples, B., 569.
  - do soil samples become acid on drying?, B., 654.
- Aaronson, H. A., preparation of pentaerythritol tetranitrate, (P.), B., 662.
- Aaronson, H. A., and Chemical Waterproofing Corporation, hardening and waterproofing of porous or fibrous materials, (P.), B., 242.
- Aars, J., change in the cathode-ray spectrum of nitrogen by cooling with liquid air, A., 236.
- Aarts, C. J. G., extraction of metals [zinc] from their [oxide]
- compounds, (P.), B., 563\*.

  Abadie, J. B. J. M., manufacture of luminous electric-discharge
- tubes containing rare gases, (P.), B., 62.

  Abaschidze, T. S. See London, E. S.

  Abbey Syndicate, Ltd., and Nanji, D. R., manufacture of textile
- yarns, (P.), B., 1011.

  Abbot, C. G., and Freeman, H. B., absorption lines of the infrared solar spectrum, A., 1208.
- Abbott Laboratories. See Adams, R., and Volwiler, E. H.
- Ab-der-Halden, C., methods of extraction of pyridine bases, B.,
- Abderhalden, E., origin of creatine, A., 843.
  - comparison of influence of various concentrations of alcohols on alcoholic fermentation, A., 1199.
- Abderhalden, E., and Brockmann, H., effect of specific compound formation between substrate and enzyme on the hydrolysis of polypeptides, A., 180.
- relationship between substrate and enzyme; influence of erepsin and trypsin-kinase on polypeptides and related compounds, A., 604.
- structure of silk fibroin, A., 1473.
- Abderhalden, E., and Buadze, S., origin of creatine or creatinine in the animal organism; purine metabolism, A., 1484.
- Abderhalden, E., and Delgado y Mier, J. J., action of N-alkali, erepsin, and trypsin-kinase on polypeptides containing d-alanine, A., 177.

- Abderhalden, E., Dinerstein, L., and Genes, S., influence of the free amino-group in polypeptides on their hydrolysis with N-alkali, erepsin, and trypsin-kinase, A., 917.
- Abderhalden, E., and Fleischmann, R., specific action of ercpsin and trypsin-kinase; their behaviour with polypeptides and their derivatives in which  $\beta$ -aminobutyric acid replaces an a-amino-acid, and the action of N-alkali on these compounds, A., 176.
- Abderhalden, E., Fleischmann, R., and Irion, W., specific action of enzymes; polypeptides containing histidine, A., 605.
- Abderhalden, E., and Herrmann, O., hydrolysis of polypeptides and their derivatives with erepsin, trypsin-kinase, and N-alkali, A., 176.
  - homogeneity of trypsin complexes? I. Behaviour of various substrates with various trypsin-kinase preparations at various  $p_{\rm H}$  values, A., 606.
  - specific action of erepsin and trypsin on certain groups in polypeptides, A., 917.
- influence of a- and  $\beta$ -amino-acids, hippuric acid, sarcosine aniline, and dipeptides on the velocity of decomposition of polypeptides with erepsin and trypsin-kinase, A., 917.
- action of cell enzymes on proteins and protein degradation products, A., 1198.
- Abderhalden, E., Irion, W., and Sickel, H., formation of urocanic acid in the tryptic digestion of edestin, A., 848.
- Abderhalden, E., and Mayer, H., specificity of enzymolytic degradation of polypeptides; polypeptides containing dl-norleucine, A., 605.
- Abderhalden, E., and Reich, F., product from  $\beta$ -alanine ester of high mol. wt., composed of  $\beta$ -alanyl groups united by linkings of amide character, A., 52.
  - action of N-alkali, erepsin, and trypsin-kinase on polypeptides containing β-alanine, A., 177.
  - specific action of enzyme complexes in fission of polypeptides, A., 604.
- influence of various alcohols in various concentrations on the rate of hydrolysis of proteins and polypeptides by proteases or the trypsin-kinase and erepsin complexes, A., 1198.
- Abderhalden,  $\hat{E}$ ., Rindtorff, E., and Schmitz, A., influence of the substitution of the free amino-group of polypeptides by various groups on their fission by N-alkali, erepsin, and trypsin-kinase, A., 177.
  - specific action of erepsin, trypsin, and trypsin-kinase; effect of the addition of a- and  $\beta$ -amino-acids, amines, etc. to the substrate-enzyme mixture, A., 353.
- Abderhalden, E., Sah, P., and Schwab, E., action of N-alkali, erepsin, and trypsin-kinase on polypeptides containing dl-aaminoisovaleric acid, A., 178.
- Abderhalden, E., and Schmitz, A., behaviour of N-sodium hydroxide, erepsin, and trypsin-kinase towards polypeptides containing a 3:5-halogen-substituted tyrosine residue, glycyld-tyrosine, glycyl-dl-nitrotyrosine, and glycyl-dl-o-tyrosine, A., 605.
- comparative study of the hydrolysis of polypeptides and their derivatives at various hydrogen ion concentrations, with crepsin and trypsin-kinase; optimal hydrogen-ion concentration for the action of these enzymes, A., 917.
- problem of separation of erepsin and trypsin or trypsinkinase complexes into fractions with specific action, A., 1198.
- Abderhalden, E., and Schwab, E., specific action of erepsin and trypsin-kinase, A., 176.

Abderhalden, E., and Schwab, E., relationship between substrate and enzyme; influence of erepsin and trypsin-kinase on

polypeptides and related compounds, A., 604. progeneity of trypsin complexes? II. Separation of homogeneity of trypsin complexes? enzymes with varying activity in the preparation of "trypsin" from pancreas powder, A., 606.

relationship between erepsin and trypsin-kinase and their substrate polypeptides and their derivatives; attempted isolation of erepsin from intestinal juice and trypsin from pancreas juice, A., 606.

comparison of enzymic degradation of proteins by successive alternating action of pepsin, trypsin-kinase, and erepsin, A.,

1197.

Abderhalden, E., and Schweitzer, F., specific action of enzyme complexes in fission of polypeptides, A., 604.

influence of structure of polypeptides and derivatives on their fission by N-alkali, erepsin, and trypsin-kinase, A., 1284.

Abderhalden, E., and Sickel, H., behaviour of ab-di-(dl-leucyl)-dl-ornithine and its phenylurethane with N-alkali, erepsin, trypsin-kinase, pepsin and hydrochloric acid, and arginase,

action of N-alkali, erepsin, and trypsin-kinase on dl-αε-dileucyl-

dl-lysine, A., 178.

reaction between guanidine and esters of amino-acids. III., A., 330.

Abderhalden, E., and Vlassopoulos, V., relationship between substrate and enzyme; influence of erepsin and trypsin-kinase on

the decomposition of certain polypeptides, A., 605.

Abderhalden, E., and Zeisset, W., homogeneity of trypsin complexes? III. Period of hydrolysis of halogenoacylaminoacids and polypeptides by various specimens of trypsin at various pa values, A., 606.

hydrolysis of polypeptides, their derivatives and amides by N-alkali, erepsin, trypsin, and trypsin-kinase, A., 916.

behaviour of isomeric r- $\alpha$ -bromopropionylnorvalines and r-alanylnorvalines towards N-alkali, erepsin, and trypsinkinase, A., 1168.

Abe, R., and Shobayashi, G., thermochemical investigation of petrolcum; thermoehemical change in squalene, A., 1037.

Abegg, F. A., effects of the waxy gene in maize on fat meta-

bolism, A., 728.

Abel, E., lead-bearing metals containing nickel and copper, (P.), B., 821.

Abel, E., and Proisl, J., equilibrium between the mono-, di-, and tri-oxides of nitrogen, A., 1383.

Abel, E., and Redlich, O., catalytic preparation of copper sulphate. A., 35.

Abelin, I., effect of electrolytes on sugar metabolism, A., 467. Abello, T. P., absorption of ultrasonic waves by some gases, A.,

Abersold, J. N. See Thomas, M. D.

Ablett, F. R., extracting nicotine and ammonia from tobacco and its products, (P.), B., 959.

Aborn, R. H., and Brown, R. H., X-ray quantitative analysis of lead tetracthyl gasoline, B., 272.

Abraham, A., biochemistry of scurvy, A., 92.

Abraham, R. A. See Abraham, Ltd., R.

Abraham, Ltd., R., and Abraham, R. A., manufacture of artificial stone specially applicable to concrete tiles, (P.), B., 646.

Abram, H. H. See Greaves, R. H.

Abramson, H. A., modification of the Northrop-Kunitz microcataphoresis cell, A., 478.

cataphoretic velocity of mammalian red blood-corpuscles, A.,

Abramson, H. A., and Michaelis, L., influence of size, shape, and conductivity of microscopically visible particles on cataphoretic mobility, A., 646.

Abrassart, A., apparatus for the distillation of fuels at low temperature, (P.), B., 195.

Abresch, K. See Jantsch, G.

Abt, G., purification of diphtheria toxin, A., 101.

Assumulatoren-Fabr. Akt.-Ges., production of [accumulator] plates of spongy lead stable in the air, (P.), B., 25. obtaining pure hydroxides of the heavy metals, (P.), B., 813.

Achard, C., and Arcand, A., proteins in blood-serum and in pathological serous fluids, A., 1331.

Acharya, D. P., spectrum of doubly-ionised krypton, A., 225. Acharya, D. P. See also Kichlu, P. K. Acherman, F. See De Montmollin, M.

Acheson Graphite Co. See Hake, D. S.

Achille Serre, Ltd. See Hatfield, A. E.

Aciéries de Gennevilliers. Sec Bunet, P. E.

Aciéries Réunies de Burbach-Eich-Dudelange Société Anonyme, [cast-steel] annealing cases, (P.), B., 985.

Acker, E. See Elöd, E.

Acker, H. See Trautz, M. Ackeren, J. van, regenerative heating apparatus [for coke ovens],

Ackeren, J. van, and Koppers Co., coking retort oven, (P.), B., 422, 464.

coke ovens, (P.), B., 631.

Ackeren, J. van. See also Koppers Co.
Aekerman, A. H., and Ackermite Co., production of copper-lead alloy with varying physical properties, (P.), B., 857. Ackerman, D. E. See Pilling, N. B.

Ackermann, C. L., nickel as a constituent of bearing metals, B., 780.

Ackermann, D., Timpe, O., and Poller, K., anserine, new constituent of bird muscle-tissue, A., 944

Ackermann, F. See Society of Chemical Industry in Basle, Ackermite Co. See Ackerman, A. H. Acklin, O., Penicillium glaucum. II. Production of mothyl ketones from triglycerides or fatty acids in the metabolism of the mould, A., 473.

Acklin, O., and Schneider, Walter, Penicillium glaucum. I. Production of methyl ketones from triglycerides or fatty acids in the metabolism of the mould, A., 218.

Acme White Lead & Color Works. See Ware, E. E.

Acquarone, A., extraction and purification of oils in closed circuits,

(P.), B., 137. Acree, S. F. See Fawcett, E. H., and Meyers, C. N.

Acsél, S. See Zemplén, G.

Aczel, I., bleaching or oxidation of fibrous substances and fabric by treatment with ozonised air, (P.), B., 678.

Adadurov, I. E., manufacture of aluminium sulphate from clays, B., 516.

manufacture of aluminium chloride from clays, B., 812. manufacture of blanc fixe, B., 825.

Adadurov, I. E., and Brodovitsch, K. I., catalytic activity of carriers of platinum, A., 1245.

dissociating action of catalyst carriers, A., 1245.

purification of crude barium chloride by sodium chloride, B.,

manufacture of zinc chloride and sulphate from Russian whiting, B., 640

Adair, G. S., thermodynamic activities of the proteins, A., 647. Adair, G. S., Cordero, N., and Shen, T. C., effect of temperature on the equilibrium of carbon dioxide and blood, and heat of ionisation of hamoglobin, A., 950.

Adam, A. T., wire for mining ropes, B., 921.

Adam, H. R., determination of the platinum metals in ores and concentrates, B., 212.

Adam, M. A., apparatus for electrolytic production of metallic powders, (P.), B., 901\*.

Adam, N. K., floating mercury on water, A., 391.

interpretation of the temperature coefficient of surface tension, A., 1366.

Adam, W. G. See Gas Light & Coke Co.
Adams, C. A., and Nicholls, J. R., analysis of mixtures containing acetone, ethyl alcohol, and isopropyl alcohol, B., 102.

Adams, C. E. See Gilman, H.

Adams, D. R., rôle of calcium in senile cataract, A., 1481.

Adams, F. W., relationship between physical properties of glasses and their suitability for manipulation by machine, B., 18.

Adams, G. O. See Clark, H. W.

Adams, H. See British Dyestuffs Corporation, Ltd. Adams, H. S., Meuser, L., and Naugatuck Chemical Co., treatment

of heavy vegetable oil, (P.), B., 403.

Adams, J. M., internal energy of electron evaporation in the electron emission of silver, A., 368.

Adams, J. R., and Merz, A. R., hygroscopicity of fertiliser materials and mixtures, B., 448.

Adams, J. R. See also Griffin, H. K.

Adams, L. H., and Gibson, R. E., elastic properties of certain basic rocks and of their constituent minerals, A., 1418. Adams, R., and Abbott Laboratories, cyclohexyl compounds and

their manufacture, (P.), B., 549. Adams, R., Barnes, O. A., and Abbott Laboratories, anæsthetic

compound, (P.), B., 958.

Adams, R., and Hyde, J. F., organic solvents; [cyclohexyl alkyl phthalates], (P.), B., 511.

Adams, R., Hyde, J. F., and Newport Co., cyclohexyl alkyl phthalates, (P.), B., 511.

Adams, R. See also Lycan, W. H., Moyer, W. W., and Stanley,

Adams, W. H., jun. See Landt, G. E.

Adamson, G. P., and General Chem. Co., manufacture of hydrochloric acid, (P.), B., 1014.

Adamson, J. See Brentano, J. Adamson, K. T., rôle of enzyme action in the formation of dental calculi, A., 1481.

Adcock, F. See Courtaulds, Ltd.

Aden, F. See Rhenania-Kunheim Ver. Chem. Fabr. A.-G. Aden, T. See Jander, G.

Aderhold, II. Seo Schaefer, C.

Adinolfi, E., influence of X-rays on the structure of bismuth and tellurium. III., A., 382.

Adkins, II., and Millington, P. E., promoter action with oxide catalysts for the decomposition of alcohols,  $\Lambda$ ., 1163. Adkins, H. See also Reynolds, R. B., and Weston, P. E.

Adler, A., and Lemmel, H., cholesterol and its esters in the blood in hepatic disease, A., 92.

Adler, A. A. Sco Böeseken, J.

Adler, R., purification and sterilisation of water by superchlorination, B., 700.

Adler, W., and Schiebaly, F., copper oxide electrodes for galvanic

purposes, (P.), B., 527.

Adolph, E. F., Nance, F. D., and Shiling, M. S., carbon dioxide capacity of human body, A., 460.

Adolph, W. H., and Prochaska, F. J., iodine survey of Nebraska, A., 1417.

Adova, A. N., and Smorodineev, J. A., nature of proteases. III. Parallelism between the activities of pepsin preparations determined by the disappearance of the substrate and by the increase in carboxyl groups, A., 1198.

Adova, A. N. See also Smorodincev, J. A.Adriani, W., sesamin and sesamolin, B., 148.

Aeckerlein, G., optical measurement of [furnace] temperature, B., 963.

Afanasiev, A. P., determination of tin and antimony in bearingmetal alloys, B., 753.

Afanasiev, A. S., influence of the solvent on the E.M.F. of silver halide cells. I. Water-ethyl alcohol mixtures, A., 769.

Agabalianz, G., inversion method for determination of hydrogenion concentration of wine, A., 1348.

Agaionov, V., determination of the weight of carbon and com-

bined water in the soils of the world, B., 407.

Agasote Millboard Co., manufacture of resin-coated pulp-board, (P.), B., 976.

Agde, G., and Lyncker, L. von, apparatus for determining the softening range and the degree of softening of coking coals, B., 462

rough estimation of the content of tar coke in lump coke, B.,  $4\bar{6}2.$ 

apparatus and method for determining the progress of gas evolution from coking coals, B., 462.

Agde, G., and Schnittspahn, M., determination of ignition points of cokes, B., 703.

Ageev, N. V., Pogodin, S. A., and Kurnakov, N. S., anomalous properties of cutectic alloys of high dispersion, B., 58.

Agfa Ansco Corporation. See Dieterle, W., Matthies, O., Meyer, Herbert, Reddelien, G., and Reitstötter, J. Aggarwal, A. L. See Dunnicliff, H. B.

Aggarwal, J. S., Darbari, N. L., and Rây, J. N., phthalazines. I., A., 1314.

Agnoli, R., insulin and excretion of urine, A., 609.

mechanism of the [biological] action of colloidal sulphur, B., 493. Agostini, P., heat of formation of double chlorides of cadmium and potassium, A., 268.

rapid method of detecting elements of groups II-IV by means

of organic reagents, A., 785. comparison of McIlhiney's and Rosenmund's methods for determining unsaturated linkings in vaselines, B., 768.

Agthe, C. A., and Goigy Akt.-Ges., J. R., manufacture of disperse systems, (P.), B., 343\*.

Ahlfeldt, G. See Tibell, W.

Ahlgren, G., mechanism of synthalin action, A., 600.

Ahlqvist, H., treatment of filter liquor [from ammonia-soda process], (P.), B., 718.

Ahmadi, M. H., and Tandon, H. L., inapplicability of Ohm's law to alternating-current circuits containing capacity and resistance, A., 1014\*.

Ahnert, C., mercerisation of loose cotton, (P.), B., 127.

Ahrens, E. See Culmaun, J. Ahrens, II. See Bredt, J.

Ahrlé, F., photographic papers, (P.), B., 872.

Aiazzi-Mancini, M., determination of cholesterol in gall-stones, A., 1328.

Ainstein, I., preparation of organic articles for electrolytically covering them with a metallic layer, (P.), B., 25, electrodeposited protective coatings for vessels [under pressure,

e.g., mineral water siphons], (P.), B., 687.

Air Liquide. Sco L'Air Liquide.

Air Reduction Co., Inc., [torch for autogenous] welding, (P.), B., 480.

Air Reduction Co., Inc. See also Roberts, M. H.

Aistrup, R., tanning-material products,  $(\hat{\mathbf{P}}.)$ , B., 1025. Aitken, P. W., bleaching of *Phormium tenax*, B., 280.

Aitken, R. S., renal threshold for chloride in man,  $\Lambda$ ., 593. Ajax Electrothermic Corporation. See Northrup, E. F

Akabori, S., and Suzuki, Tazo, catalytic transference of hydrogen between organic compounds, A., 1170, 1289\*.

Akerlöf, G., activity coefficients of diacetone alcohol in aqueous salt solutions, A., 649.

Akeroyd, H., grinding-stones used on wood-pulping machines, (P.), B., 938.

Akinov, I. G. See Okolov, F. S.
Akivis, A. I. See Tronov, B. V.
Akiya, M., inorganic salts and the acid-base equilibrium of the

blood in fever, A., 841. Akopov, N. M. See Kostrin, K. V

Aktiebolaget Bästa. See Heijkenskjöld, G. O. W.

Aktiebolaget Baltic. See Ruda, G. W.

Aktiebolaget Filtrum, [automatic] apparatus for [base-exchange] treatment of water, (P.), B., 152.

Aktiebolaget Ljungströms Angturbin, regenerative heat-exchange apparatus, (P.), B., 115.

Aktiebolaget Separator, recovery of oil from fatty solutions of proteins and glues in water, (P.), B., 63. centrifugal separators, (P.), B., 79, 498, 839. operation of centrifugal separators, (P.), B., 580.

purification of sugar juice, (P.), B., 618.

bearings for spindles of centrifugal separators, (P.), B., 702. centrifugal cleaning of liquids, (P.), B., 1001.

Aktiebolaget Separator, and Flight, W. S., treating wool-washing water, (P.), B., 456.

Aktiebolaget Separator. See also Aktiebolaget Separator-Nobel and Dunlop Rubber Co., Ltd.

Aktiebolaget Separator-Nobel, and Aktiebolaget Separator, separation of paraffinous constituents, etc. from [mineral] oils, (P.), B., 161.

Aktiebolaget Separator-Nobel. See also Forsberg,  $E.\ A.$ Aktien-Gesellschaft Brown, Boveri & Co., heat-exchange apparatus,

(P.), B., 116. [operation of] electric annealing furnaces of the resistance type, (P.), B., 177.

economical carrying-out of refrigeration on a large scale, (P.), B., 193.

distillation of water for the make-up feed in steam supply plants, (P.), B., 456. annealing furnace, (P.), B., 478.

Aktien-Gesellschaft Brown, Boveri & Co. See also Schonbrunn, J., and Wirz, E.

Aktien-Gesellschaft der Maschinenfabr. Escher Wyss & Cie. See Stauffer, W.

Aktien-Gesellschaft Seeriet. See Egli, II.

Aktieselskabet Amundsen Refrigerator Co., refrigerating plants, (P.), B., 81.

Aktieselskabet Dansk Gaerings Industri, manufacture of spirit and yeast by working-up molasses, (P.), B., 262. purification of molasses [for manufacture of spirit and yeast], (P.), B., 372.

biological purification of waste water, (P.), B., 418.

Aktieselskabet Dansk Gaerings Industri and Lesienicka Fabr. Drozdzy prasowanych i spirytusu Spolka Akcyjna (Lesienitzer Spiritus & Presshefefabr. Akt.-Ges.), biological purification of waste waters from yeast and sugar factories, distilleries, and other factories, (P.), B., 418.

Aktieselskapet Krystal. See Isaachsen, I., and Jeremiassen, F.

Aktieselskapet Malmindustri, manufacture of aluminium from alumina, (P.), B., 134.

oxidation of phosphorus vapour, (P.), B., 517.

Aktieselskapet Norsk Staal (Elektrisk-Gas-Reduktion), and Edwin, E., shaft furnaces and reaction chambers for treating solid materials with gases, (P.), B., 963.

Aknlov, N. S., magnetostriction of a single iron crystal, A., 248. atomic theory of ferro-magnetism, A., 752.

magnetic quadrupole moment of the iron atom, A., 1224.

Aladdin Industries, Ltd., and Davis, C. W., [head for upright] incandescent mantles, (P.), B., 971.

Alaschewski, G. See Silesia Ver. Chem. Fabr.

Albanese, A., and Pedroni, A., fluid extracts. II. Fluid extract of Hydrastis canadensis, B., 36.

Alber, H., microchemical detection of glycerol, ethylene glycol, and d-mannitol, A., 337.

Alber, V. M., vacuum arc, A., 1416.
Albers, V. M., vacuum arc, A., 1416.
Albers, V. M., and Phipps, T. E., method for determining whether or not an electron has a magnetic moment comparable with that of a hydrogen atom, A., 1210.

Albers, V. M. See also Sanders, W. H.

Albert, A., manufacture of arsenobenzenes, (P.), B., 150.

Albert, A. See also Pfleger, J.

Albrecht, E., ratio of intensities of modified to unmodified radiation in scattering of X-rays, A., 1208.

Albrecht, P., determination of small amounts of silica in orthophosphoric acid, B., 281.

Albrecht, W. A., and Davis, F. L., relation of calcium to the nodulation of soya beans on acid and neutral soils, B., 992.

Albrecht, W. H., magnetic and crystallographic investigations;

ferric oxide hydrates, A., 869.

Albrecht, W. H. See also Hendricks, S. B. Albright, F. See Bauer, W. Albu, H. W., and Zocher, H., striking phenomenon with laminated mica crystals, A., 744.

Alcock, H. J. See Dunlop Rubber Co., Ltd.

Alcock, J. E., manufacture of composite or non-splintering glass,

(P.), B., 979.

Alder, K. See Diels, O.

Alderson, F. J., [frosted] electric incandescence lamps [for automobiles], (P.), B., 650.

Aldrich, M. See Green, C. H.

Aleiev, A. E., and Gerasimov, A. F., macroscopic method of determining the cataphoretic velocity of colloidal particles. A., 761

Aleš, A., absorption of solvent vapours, B., 343.

Alessandri, L., reactions of nitroso-derivatives with unsaturated compounds. VI. Catalytic action of nitroso-derivatives on o-nitro-substituted [aryl]-acetylenes; behaviour of p-nitrosoanisole, A., 64.

reactions of nitroso-derivatives with unsaturated compounds. VII. New isomerides of o-nitrophenylpropiolates and isatogenates, A., 185.

Alewyn, W. F. See Honig, P. Alexander, E. See Hevesy, G. von. Alexander, H. H., melting and refining of copper, (P.), B., 479,

refining of copper, (P.), B., 562, 648.

Alexander, L. M., distribution of electrons in atoms, A., 487. Alexander, W., apparatus for purifying steam, vapours, and gases centrifugally, (P.), B., 80.
spray dryers, (P.), B., 838.
Alexandrov, Z. See Nametkin, S.
Alexandrova, R. S. See Ivanov, N. N.
Alexandry, A. K. See London, E. S., and Nedsvedsky, S. V.

Alexeev, A. I., influence of high altitude on the catalase content of blood, A., 717.

Alexeevski, E. V., Russian chemical nomenclature, A., 904. adsorption of vapours by animal and vegetable fibres, B.,

Alexeevski, E. V., and Avgastinik, A. I., influence of some physical and chemical factors on the activity of charcoal, A., 658.

Alexev, N. See Petrov, G.
Alferov, M. I. See Brodsky, A. E.
Alfred, T. C., pulveriser, (P.), B., 78.
Alfuss, W. See Dilthey, W., and Pfeiffer, P.
Algar, J., and Hanlon, P. J., dichalkones derived from diacetoresorcinol, A., 816,

Algar, J., and MacDonnell, (Miss) N. M., condensation of aldehydes with nitrodiacetoresorcinol, A., 816.

Algar, J. See also Cullinane, N. M.

Algemeene Norit Maatschappij, production and regeneration of activated carbon; production of activated carbon, (P.), B., 312. Algemeene Norit Maatschappij. Sce also N.V. Noritvereeniging Verkoop Centrale.

Alichanov, A. J., röntgenographic investigations on aluminium at high temperatures, A., 987.

Ali-Cohen, E. S., manufacture, from latex, of an artificial guttapercha and a non-hygroscopic rubber, (P.), B., 652.

Alimarin, I. P. See Viskont, K. I.

Alimchandani, R. L. See Meldrum, A. N.

Allan, F. N., hyperinsulinism, A., 1100. Allan, H., Dickens, F., Dodds, E. C., and Howitt, F. O., cestrus-producing hormone: its preparation and standardisation in a water-soluble form, A., 102.

Allan, J. McN. See Cammell, Laird & Co., Ltd.

Allan, W. G., and Clark, F. G., electrolytic apparatus, (P.), B., 331. Allard, G., crystalline structure of thorium boride, A., 987.

Allard, V., microscopical examination of lithopones and zine

whites, **B**., 27.

Allardt,  $\hat{H}$ .  $\hat{G}$ . See Schoeller, W.

Allchin, L. J. Sec Imperial Chemical Industries, Ltd.

Allegheny Steel Co. See Caugherty, W. E., and Schulte, L.Alleman, G., and Sun Oil Co., manufacture of fatty acid and soap derived from mineral oil; manufacture of mineral oil derivatives, (P.), B., 179.

mineral oil derivative and its manufacture, (P.), B., 274.

Allemann, O. See Society of Chemical Industry in Basle. Allen, A. W., production of clear brine or other liquors, (P.), B., 516.

Allen, C. F. H., and Bridgess, M. P., additive reactions of phenyl vinyl ketone. I. Phenylnitromethane, A., 1071.

Allen, D. See Bulger, H. A.

Allen, F. B. See Clare, R. L. Allen, F. W., and Luck, J. M., oxidation of dixanthhydrylcarbamide by dichromate: determination of carbamide, A., 962.

Allen, H. C., analyses of some natural gasoline gases before and after treatment, B., 1039.

Allen, H. S., light scattering and the hydrogen spectrum, A., 363. Allen, J., electric discharge tubes, (P.), B., 650. Allen, J. S. See Seyer, W. F.

Allen, L., and Deering, E. C., manufacture of transfers and their application for the decoration of pottery, glass, enamelled iron, jewellery, etc., (P.), B., 852.

Allen, R. N., bending glass tubing, A., 785. Allen, R. P. See Bancroft, W. D.

Allen, S. G., operation of blast furnaces, (P.), B., 175. reduction of ores to obtain ferro-alloys, (P.), B., 214.

Allen, S. G., and De Baufre, W. L., rectification of mixed gases, (P.), B., 500.

Allen, S. G. Sec also Davis, F. W., De Baufre, W. L., and Tol-

Allen & Co., Ltd., E. See Everitt, C. K.
Allgeier, R. J., Peterson, W. H., and Fred, E. B., colorimetric determination of butyric acid, A., 1093.

production of acetic and lactic acids [by fermentation] from mill sawdust, B., 1028.

Allgemeine Elektricitäts-Gesellschaft, manufacture of cathodes for discharge devices, (P.), B., 178.

Allgemeine Elektricitäts-Gesellschaft. See also Internat. Gen. Electric Co., Inc.

Allgemeine Gesellschaft für Chemische Industrie m.b.H., purific-

ation of petroleum hydrocarbons, (P.), B., 161. treatment of hydrocarbons with liquid sulphur dioxide, (P.), B., 273.

production of mineral lubricating oils, (P.), B., 386.

drying of gases, (P.), B., 628.

Allin, E. See McLennan, J. C

Alliott, E. A., Bois, C., and Hatfield, A. E., filtration, (P.), B., 544\*.

Alliott, E. A. See also Hatfield, A. E.Allis-Chalmers Manufacturing Co., Greisen, E. C., and Newhouse, R. C., [rotary-drum] comminuting mills, (P.), B., 497.

Allis-Chalmers Manufacturing Co. See also Dorfan, M.LAllison, F., effect of X-rays on certain optical properties of liquids and glass, A., 1220.

time-lag differences of the Faraday effect in several mixtures and compounds, A., 1365.

Allison, J. B., toxicity of hydrogen cyanide, B., 304.

Allison, S. K., experimental evidence for the filling of electron levels from the relative intensity of X-ray spectrum lines, A., 986.

resolution of the line  $L\beta_2$  into its diagram components and the relative widths of some X-ray spectrum lines, A., 1120.

Allmand, A. J., connexion between absorbed energy and velocity in photochemical reactions of the Io type, A., 1021. Allmand, A.J., and Beesley, E., photochemical union of hydrogen

and chlorine, A., 276. Allmand, A.J., and Burrage, L.J., rapid method for approximate determination of sorption isothermals of vapours of charcoal.

II. Simple retentivity test, B., 153. Allmand, A. J., Chaplin, R., and Shiels, D. O., sorption of water vapour by activated charcoals. II. Isothermals in presence

of air, A., 999. Allmand, A. J., and Hand, P. G. T., sorption of water vapour by activated charcoals. III. Isothermals in presence of nitrogen,

A., 999. Allmand, A.J., and Manning, J.E., rapid method for approximate determination of sorption isothermals of vapours on charcoal.

Principle of the method, B., 153.

Allmand,  $\hat{A}$ . J., and Spinks, J. W. T., photosensitised decom-

position of ozone, A., 1248.

Alimand, A. J., and Webb, W. W., photolysis of potassium ferri-oxalate solutions. I. Experimental. II. Discussion, A.,

Alloy Welding Processes, Ltd., and Jones, E. H., arc-welding electrodes, (P.), B., 217.

Alloy Welding Processes, Ltd., Jones, E. H., and Clarke, E. J., [electrode holder for] electric arc-welding, cutting, or soldering, (P.), B., 101.

Alloys Co. See Newell, M.H. Allport, N.L., assay of ointments of mercuric oxide and ammoniated mercury, B., 111.

Allyn, W. P., relation of lime to the absorption of iron by plants, B., 143.

Almin, A. See Westgren, A.

Alox Chemical Corporation, preparation of a softening agent for coating compositions containing nitrocellulose, etc.; coating compositions, (P.), B., 219.

emulsions from partially oxidised petroleum wax, and their manufacture, (P.), B., 348.

atomisable motor fuel product, (P.), B., 466\*.

oxidation of hydrocarbons, (P.), B., 467\*.

paper-sizing agents, (P.), B., 514.

artificial shellac and its manufacture, (P.), B., 651.

Alox Chemical Corporation. See also Burwell, A. W.

Alphen, J. van, 1:3:4-oxadiazines. III. and IV., A., 334, 707. Alsa Société Anonyme, manufacture of hollow artificial textile threads from viscose, (P.), B., 639.

Alsberg, C. L. See Petree, L. G., and Sahyun, M.

Alsberg, J., and Superheater Co., preventing the formation of [boiler] scale, (P.), B., 700.

Alsina, F. D., and Pijoan, J. R., changes in the alkali reserve and chloride content of the blood in experimental intestinal closure, A., 1100.

Alston, N. A., and West, J., structure of topaz  $[Al(F,OH)_2SiO_4]$ ,

A., 15.
Alt, H. L., metabolism in pernicious anæmia, A., 716. Alterthum, H., speed of volatilisation of tungsten in presence of 'salt vapours, A., 863.

tungsten in the chemical industry, (P.), B., 398.

Althammer, W., hot and cold decomposition of carnallite, and Wilson's rule, B., 775.

Alther, J. G., and Universal Oil Products Co., cracking of [petroleum] oils, (P.), B., 9.
Althoff, P. See Wärme-Kälteschutz G.m.b.H. Althoff & Schoenau.

Altmann, E. See Neumann, B.

Altpeter, L., centrifuge, (P.), B., 308\*. Altschul, R., staining of glial cells, A., 342.

impregnation [of tissues] with gold, A., 591.

Altwegg, J., Dutel, A. M., and Société des Usines Chim. Rhône-Poulenc, dry manufacture of calcium arsenite, (P.), B., 681. Alty, T. See Currie, B. W., and Leech-Porter, J. A. H.

Aluminium Industrie Akt.-Ges., recovery of light metals, especially aluminium, from ores, (P.), B., 134.

electrolytic production of aluminium, (P.), B., 945. Aluminium-Industrie Akt.-Ges. See also Weber, J.

Aluminium, Ltd., moulds for casting metals, (P.), B., 1020.

Aluminum Co. of America. See Archer, R. S., and Bezzenberger, F. K.

Aluminum Solder Corporation. See Geisel, K.

Alwall, N., preparation of succinodehydrogenasc free from fumarase, A., 98. Alyea, H. N., and Bäckström, H. L. J., inhibitive action of

alcohols on the oxidation of sodium sulphite, A., 273.

Amadori, M., condensation products of dextrose and p-phenetidine. II., A., 439.

condensation products of dextrose and p-anisidine, A., 552.

Amagat, (Mlle.). See Ramart, (Mme.) P

Amaldi, E., quantum theory of the Raman effect, A., 975.

Amar, J., origin and destination of cell-fat, A., 955.

Ambard, L., and Schmid, F., biological rôle of calcium salts, A., 600.

Ambert, P. See Fleury, P.

Ambinder, N. See Niederl, J. B.

Ambler, H. R., apparatus for the analysis of small samples of gas, A., 1262.

Ambler, J. A., reaction between amino-acids and dextrose, B.,

Ambros, O., and Harteneck, A., natural activation of proteases of plant latexes, A., 606.
plant proteases. XIV. Proteases of higher plants, A., 1338.

Ambros, O. See also Griessbach, R.

Ambrus, G., physiology of surviving mammalian hearts. V. Sugar consumption of the surviving hearts of normal cats,

physiology of surviving mammalian hearts. VI. Sugar utilisation of the hearts of normal and thyroidectomised cats after administration of thyroxine, A., 467.

Ambruster, H. W., manufacture of insecticides, (P.), B., 144.

American Aggregate Co. See Hayde, S.J.American Anode, Inc. See Sheppard, S.E.

American Bemberg Corporation. See Hartmann, A., and Holmann, H.

American Bosch Magneto Corporation. See Shulimson, I. A. American Bottlers of Carbonated Beverages. See Buchanan, J. H.American By-product Machinery Co. See MacLachlan, A. American Chemical Paint Co. See Gravell, J. H.

American Chemical Society, Division of Cellulose Chemistry, standard method for determining the viscosity of cellulose in cuprammonium hydroxide, B., 278.

determination of a-cellulose, B., 278.

American Chemical Society, Division of Rubber Chemistry, Physical Testing Committee, importance of temperature and humidity control in rubber testing. I. Stress-strain and tensile properties, B., 104.

importance of temperature and humidity control in rubber test-

ing. II. Resistance to abrasion, B., 827.

American Cyanamid Co., flotation agents, (P.), B., 604. solutions of cellulose esters, particularly for use as varnishes, (P.), B., 691.

American Cyanamid Co. See also Barsky, G., Buchanan, G. H., Heuser, R. V., and Mathey, E. Du B.

American Doucil Co. Sco Hilditch, T. P., and Wheaton, H. G. American Dressler Tunnel Kilns, Inc., tunnel ovens, etc., (P.), B., 645

American Dressler Tunnel Kilns, Inc. See also Dressler, P. d'H., and Meehan, P. A.

American Encaustic Tiling Co., Ltd. See Prouty, W. O.

American Engineering Co., crusher roll construction, (P.), B., 543. furnaces, (P.), B., 625.

automatic-stoker retort furnaces, (P.), B., 665.

furnace walls, (P.), B., 665.

American Gasaccumulator Co. See Steil, E.

American Machine & Foundry Co., metal foil, (P.), B., 648.

American Machine & Foundry Co. See also Smith, F.

American Magnesium Corporation. Sec Bakken, H. E., Jeffries, Z., and Wood, R. T.

American Maize Products Co. See Daly, R. E.

American Metal Co., Ltd. See Kirmse, E.

American Nuplax Corporation. See Homberg, F., and Landecker,

American Paint and Varnish Manufacturers' Association, spreading rates and durability of low- and high-grade paints, B., 443. American Phototure Co., method and apparatus for developing exposed photographic surfaces [by atomisation], (P.), B., 265. American Potash & Chemical Corporation, Burke, W. E., and De

Ropp, H., manufacture of boric acid, (P.), B., 516.

American Potash & Chemical Corporation, See also Burke, W. E., and Ritchie, C. F.

American Pulverizer Co. See Teipel, J.

American Radiator Co., and Meloche, D. H., furnace treatment of metal and metalliferous material, (P.), B., 398.

American Rolling Mill Co. See Beck, W. J., and Murphy, A. F. American Shale Reduction Co. See Postel, C.

American Smelting & Refining Co. See De Paulles, C. A. H., Gonser, B. W., Hills, F. G., Lannon, F. P., jun., O'Harra, B. M., Teats, R., and York, H. W.

American Steel Foundries. See Hamilton, W. C.

Ames, J. W. See Salter, R. M.

Amick, C. A., volumetric determination of dextrose, A., 459. Amiesite Asphalt Co. of America, manufacture of road-surfacing

materials or compounds, (P.), B., 248, 520. manufacture [laying] of stone asphalt roadways, (P.), B., 521.

Amin, M. B. See Naik, K. G.

Amira Trust, production of screen negatives for producing photomechanical printing surfaces, (P.), B., 961.

Amis, M. B. See Link, L. Ammer, G. See Benrath, A.

Ammermann, E., and Kornfeld, H., crystal decomposition and a-veins [in mild steel], B., 818.

Ammon, E. von, and Szombathy, K., extraction of lupanine, (P.), B., 37.

extirpation of insects noxious to plants, (P.), B., 1026.

insecticide, (P.), B., 1026.

Ammon, R. Sce Lesser, E. J., and Weber, H. H.

Amos, A. J., rice husks in bran and sharps, B., 620.

Amrad Corporation. See Woodhull, S. T. Amsler-Morton Co., Morton, W. A., and Geer, P. L., apparatus [lehrs] for annealing glassware, (P.), B., 474.

Amy, L. See Bayle, EAnable, A., complete sludge-washing plant in a single unit, B., 379.

Anacker, E., evaluation of [sulphite-]cellulose extracts [for tanning], B., 105.

Anaconda Sales Co. See Wanamaker, E. M.

Anand, C. See Seth, J. B.

Anastasi, C., and Guglialmelli, L., nitrophenylfluorenylamines, A., 437.

Anastasiadis, L., aluminium and the formation of mixed crystals with silicon, A., 501.

Anastasiadis, L. See also Guertler, W.

Anciens Établissements A. Combe, Fils & Cie. See Friedman, C. S.

Anciens Établissements A. Savy, Jeanjean & Cie. See Hulme, A, G

Andant, A., relations between the chemical constitution, absorption [spectra], and fluorescence of alkaloids, A., 1090.

Andauer, (Frl.) M., P.D. at the surface of separation between metal and air, A., 144.

Anderegg, L. T., and Hammer, B. W., proteolysis by Streptococcus lactis, A., 1108.

Anderson, A., and Nightingale, E., test for vitamin-A in margarine, butter, and other fatty foods, B., 736.

Anderson, A. D. See Weldrics (1922), Ltd.

Anderson, A. K., and Honeywell, H. E., blood-chemistry of the albino-rat, A., 206.

Anderson, A. K. See also Parsons, C. S. Anderson, C. G., Charlton, W., and Haworth, W. N., constitution of glucose-monoacetone and -diacetone, and of the derived

γεζ-trimethylglucose and γ-monomethylglucose, A., 1044. Anderson, C. G., Charlton, W., Haworth, W. N., and Nicholson, V. S., constitution of  $\alpha$ - and  $\beta$ -fructosediacetones; alleged oxidative degradation of the derived monomethyl- and tetramethyl-fructoses, A., 1044.

Anderson, C. N., and Parke, Davis & Co., medicinal compound, (P.), B., 453.

Anderson, D. M. See Vickers, Ltd.

Anderson, D. S., preparing [colouring] foliage, (P.), B., 639.

Anderson, E. A. Sco Peirce, W. M.

Anderson, E. X., and Froemke, J. A., nucleus formation in the condensation of vapours in non-ionised dust-free air, A., 1234. Anderson, H. G., rapid-indicating continuous-reading vacuum

and pressure gauges, A., 1161.

Anderson, H. V., and Clark, G. L., application of X-rays in the classification of fibrous silicate minerals commonly termed

asbestos, A., 1263.
Anderson, H. V. See also Clark, G. L.

Anderson, I. A., use of bacteriostatic dives in the isolation of Rhizobium leguminosarum, Frank, A., 1494.

Anderson, I. B., Thomson, R. F., Thomas, J., and Scottish Dyes, Ltd., production of dibenzanthrone, (P.), B., 123. production of benzanthrone derivatives [isodibenzanthrones],

(P.), B., 237.

Anderson, J. A., and Central Oil & Gas Stove Co., enamel-coated article, (P.), B., 209.

Anderson, J. M. See McLennan, J. C.

Anderson, L. C., tautomerism of hydroxytriarylcarbinols. II.,

Anderson, L. J. See Stephens, F. G. C. Anderson, M. S., influence of substituted cations on the properties of soil colloids, B., 568.

Anderson, P. A., electromotive behaviour of single metal crystals, A., 127.

Anderson, R. J., grape pigments. III. Anthocyans in Scibel grapes, A., 451\*.

lipins of tubercle bacilli. III. Phthioic acid, A., 1108. lipins of tubercle bacilli. IV. Purified wax of tubercle bacilli, A., 1342.

biologically active lipins of tubercle bacilli, A., 1493.

Anderson, R. J., and Nabenhauer, F. P., grape pigments. II. Anthoeyans in Clinton grapes, A., 451\*. Anderson, R. J. See also Shriner, R. L.

Anderson, Robert J., effect of heat treatment on some mechanical properties of 86:4:6:3:1 copper-nickel-tin-zinc-lead alloy, B., 99.

Anderson, W., reason why an elementary quantum of electricity cannot split up into still smaller charges, A., 7.

ordinary matter and radiant energy as different phases of one and the same fundamental state, A., 623.

"mechanical" ionisation of gases under extreme pressure at any low temperature, A., 861.

limiting density of matter and energy, A., 1137.

formation of ozone in the highest layers of the atmosphere, A., 1162.

Anderson, W. E. See McAmis, A. J.

Anderson & Son, Ltd., D., and Child, R. O., grinding and mixing apparatus, (P.), B., 267.

Ando, K., Hofmeister ionic series in the precipitation of the hydrophilic colloids, A., 27.

gastric lipase in various stomach diseases, A., 92. significance of iron in biological oxidation. I. Rôle of ferrous salts as aldehydase. II. Rôle of ferrous salts as oxidoreductases for various organic substances, A., 602. André, E., treatment of oil seeds, etc., (P.), B., 218.

economic utilisation of residues from oil manufacture: production of comestible flours rich in aleurone, B., 565.

Andre, H., [electrical] conductors of high negative temperature coefficient, (P.), B., 61, 216.

Andreadis, T., [determination of] nitrate content of tobacco, A., 613.

tobacco fermentation, A., 1347.

Andreas, K. See Benrath,  $\Lambda$ . Andreasen, A. H. M., validity of Stokes' law for non-spherical particles, A., 877.

Andreasen, A. H. M., and Lundberg, J. J. V., velocity of clutriation and particle size, A., 1233.

Andreasov, L. M., distribution of trichloroacetic acid between water and organic solvents, A., 998.

stability of tert.-amyl trichloroacetate in different solvents, A., 1017.

reaction between amyleno and dichloroacetic acid, A., 1040. reaction limits in the formation of amyl trichloroacetate in mixtures of solvents, A., 1040.

equilibrium between amylene and trichloroacetic acid in nonaqueous solvents, A., 1236.

Andreev, A., Fréedericksz, V., and Kazarnirvsky, I., variation of the piezo-electric constant of quartz with temperature, A., 752.
 Andreeva, N. See Bennewitz, K.

Andreiev, P., determination of petrol or benzol vapour in air,

Andreiev, P., and Gavrilov, A. A., colorimetric determination of turpentine vapours in air, B., 825

Andreiev, S. V., and Georgievski, S. I., changes in the activity of the intestinal juice enzymes depending on the kind of food. I. Amylolytic enzyme, A., 602.

Andren, J. L., manufacture of alloy steels, (P.), B., 329. Andresen, G. See Brahm, C.

Andresen, P. H., effect of metallic salts on the development of bacteria. II. Silver, A., 220.

Andress, F.J., and Brownie Corporation, preservation of beverages, (P.), B., 72.

Andress, K. R., X-ray diagram of native cellulose, A., 630.

Andrew, J. H., secondary hardening of alloy steel, B., 21.

Andrew, J. H., and Binnie, D., third report on heterogeneity of steelingots. I. Introduction. II. Liquidus and solidus ranges of some commercial steels. III. Solubility of iron and man-ganese sulphides in steel, B., 600.

Andrew,  $J. \dot{H}.$ , and M'Neil, H., effect of annealing on the solidus temperature of alloys, B., 438.

Andrew, L. W. See Hammick, D. L.

Andrew, R. H. See Fenger, F.

Andrew, R. L., cryoscopic method for detection of added water in milk, B., 414.

Andrewes, U. See Richardson, O. W.

Andrews, A. H. See South Metropolitan Gas Co.

Andrews, A. I., properties of simple enamel glasses, B., 644.

Andrews, A. I., and Commons, C. H., wet-process leadless castiron enamels, B., 918.

Andrews, C. E. See Canon, F. A.

Andrews, C. W., manufacture of water-gas, (P.), B., 506.

Andrews, C. W., and Brassert, H. A., production of gas, (P.),

production of water-gas, (P.), B., 668.

Andrews, C. W., Chapman, W. B., Brassert & Co., H. A., and Western Gas Construction Co., generation of gas, (P.), B., 506.

Andrews, C. W. See also Rusby, J. M.
 Andrews, D. H., and Haworth, E., application of the rule of Dulong and Petit to molecules, A., 128.

Andrews, D. H. See also Freyer, E. B. Andrews, E., Thomas, W. A., and Schlegel, K., [excretion of

protein in] liver disease, A., 596.

Andrews, E., Thomas, W. A., and Welker, W. F., albuminuria in the mechanism of detoxification, A., 344.

Andrews, E. See also Reuterskiold, K.

Andrews, E. F., and Andrews-Hammond Corporation, [electrodes for] electrolytic condenser, (P.), B., 688.

Andrews, J. C., alkaline decomposition of cystine, A., 85. new crystalline form of tyrosine, A., 1283.

Andrews, J. T. R. See Richardson, A. S.

Andrews, J. W., and Western Electric Co., Inc., production of magnetic materials [iron-nickel alloy], (P.), B., 440.

Andrews, L. H., and McElvain, S. M.,  $\gamma$ -pyrrolidino- and  $\gamma$ -pyrrolino-propyl benzoates, A., 576.

Andrews, (Miss) M. R., evaporation of thorium from tungsten, A., 486.

Andrews, T., hardened-fat manufacture; oil impurities as catalytic poisons, B., 441.

Andrews-Hammond Corporation. See Andrews, E. F.

Andriessen, A. See Pummerer, R. Andriessens, H. See Society of Chemical Industry in Basle. Andron, P., determination of chloral in syrup of chloral, B., 35.

Andronikov, (Mme.) N. See Teletov, J.

Angel, F., chemical relationships of rock-forming pyroxenes and amphiboles to one another and to the matrix, A., 1263. well-crystallised blast-furnace slag, B., 721.

Angel, F., and Rusch, A., rocks from the Stubalp, Styria, A., 673. Angel, G., the Backman mechanical bleaching-powder chamber, B., 93.

Angel, G., and Beck-Friis, G., electrolytic corrosion due to current leakages and its prevention, B., 985.

Angelescu, B. See Minovici, S.

Angelescu, E., solubility in mixed solvents. II. Solubility of a substance which is miscible in all proportions with one of the solvents, A., 131.

equilibrium between two liquid phases. V. System anilinepropionic acid-water. VI. System o-toluidine-propionic acid-water, A., 388.

Angelescu, E, and Bălănescn, C, fixation of phosphoric acid by ferric hydroxide in presence of varying amounts of ammonia, A., 532.

Angelescu, E., and Comanescu, V. N., adsorption of acetic and propionic acids in presence of salts with a common anion, A., 389.

Angelescu, H., protein metabolism of organs of animals kept in air under reduced pressure, A., 1102.

Angeletti, A., and Gatti, D., new derivatives of diphenyl, A., 182. Angeli, A., constitution and reactions of diazohydrates, A., 1290. Angeli, A., Bigiavi, D., and Jolles, Z., scission of certain sulphohydroxamic acids, A., 548.

Angeli, A., and Jolles, Z., reduction of normal diazohydrates, A., 1290.

Angell, H. R. See Link, K. P.

Angerhausen, J., and Schulze, G., detection of egg-yolk in margarine, B., 338.

margarine containing egg yolk, B., 658.

Angern, O. See Pfeiffer, P.

Angevine, R. W., fat excretion. VI. Excretion by Thiry-Vella fistulas, A., 953.

Anglade, M. See Bert, L.

Anglo-American Corporation of South Africa, Ltd., solvent treatment of copper silicate ores, (P.), B., 330.

Anglo-Persian Oil Co., Ltd., Dunstan, A. E., and Wheeler, R. V., heat-treatment of hydrocarbon gases, (P.), B., 509.

Anglo-Persian Oil Co., Ltd. See also Auld, S. J. M., and Beale,  $\tilde{E}$ . S. L.

Anglo-Scottish Beet Sugar Corporation, Ltd. See Wiese, II.

Angus, T. C. See Campbell, J. Argyll

Anheuser-Busch, Inc. See Bratton, G. S. Anitschkov, S. V., and Kusnetzov, A. I., heart-lung-adrenal preparation, A., 102.

Annener Gussstahlwerk Akt.-Ges., making of castings, (P.), B.,

Anode Rubber Co., Ltd., production of rubber and other goods with textile insertions attached thereto or embedded therein, (P.), B., 257.

production of rubber articles from natural rubber latex, (P.),

Anode Rubber Co., Ltd., and Anode Rubber Co. (England), Ltd., coating of perforated metal sheets and articles with rubber, (P.), B., 526.

Anode Rubber Co., Ltd., and Darby, C. L., dehydrating rubber deposited from aqueous dispersions, (P.), B., 990.

Anode Rubber Co., Ltd., Szegvari, A., and Spencer, C. M., apparatus for filtering rubber dispersions, (P.), B., 990.

Anode Rubber Co., Ltd., and Wilson, G. F., coating or plating apparatus, (P.), B., 1024.

Anode Rubber Co., Ltd. See also Klein, P.

Anode Rubber Co. (England), Ltd., and Compagnie Générale d'Electricité Soc. Anon., preparation of viscous dispersions of rubber and similar materials, (P.), B., 949.

production of deposits or coatings from aqueous suspensions of rubber, (P.), B., 990.

Anode Rubber Co. (England), Ltd. See also Anode Rubber Co., Ltd., and Dunlop Rubber Co., Ltd.

Anossov, V., and Gagen, O., active charcoal from peat, B., 915. Anschütz, L., and Boedeker, H., does anthranilyl chloride exist?, A., 696.

Anselmino, K. J., Eichler, O., and Schlossmann, H., effect of thyroxine on the metabolism of surviving tissue, A., 475.

Ansheles, J. M., and Vlodavetz, N. J., tikhwinite, A., 289.

Ansingh, E. W., examination of samples of opium of varying composition, B., 996.

Anslow, W. K., and King, Harold, constitution of red isomeride of creatinine picrate responsible for Jaffe's colour reaction, A.,

Anson, M. L., and Mirsky, A. E., hæmochromogen, A., 87. hæm and tissue-iron, A., 340.

Anson, M. L. See also Mirsky, A. E., and Northrop, J. H. Antipov-Karataëv, J. N., permanganate method for the determination of the oxidisability of organic matter in water and aqueous soil extracts containing chlorides, B., 571.

Antoine, V., production of glazed and coloured paper, (P.), B.,

Anton, E. See Braun, J. von. Anton, G. See Behrens, B.

Antoniani, C., and Bonetti, S., application of the strychnomolybdic process to the determination of phosphoric acid in soil, B., 571.

Antoniani,  $C_{\cdot,\cdot}$  and Fonio,  $G_{\cdot,\cdot}$  interchange of the phosphoric acid

of the soil with arsenic acid, B., 447.

Antropoff, A. von, main types of first-order chemical compounds, illustrated by the carbides, A., 21.

Antropoff, A. von, and Germann, E., kinetics of the reaction between calcium and nitrogen, A., 34.

Antropp, W. See Kailan, A.

Apold, A., and Fleissner, H., roasting of iron carbonate ores, (P.), B., 945\*.

Appareils et Evaporateurs Kestner, solidification of nitrate of lime by rotary cooling drums, (P.), B., 643.

production of ammonium nitrate, (P.), B., 1014.

crystallisation of substances that crystallise exothermically, (P.), B., 1035.

Appel, M., furnace, (P.), B., 875.

Appel, R., electrolytic separation of metallic chromium for production of chromium coatings on other metals, (P.), B., 563\*. Appel, W. D., and Reed, R. F., light-fastness of lithographic ink

pigments, B., 1046.

Appenzeller, E. See Grasselli Dyestuff Corp.

Appleman, C. O., Loomis, W. E., Phillips, T. G., Tottingham, W. E., and Willaman, J. J., determination of peptide and basic forms of nitrogen, A., 204.

Appleman, W. K. See Schmidt, C. L. A.
Appleton, E. V., equivalent heights of the atmospheric ionised regions in England and America, A., 535.

Appleyard, K. C., Bewicke, P. W., Laycock, (Sir) J. F., Portall, M. R., and Manners, W. E., sorting of granular materials, (P.), B., 269.

Appleyard, K. C., Holmes, C. W. H., Bramwell, I. L., and Birtley Iron Co., Ltd., separation of dry materials, (P.), B., 876.

Arakawa, S. See Itano, A.

Aranda, V. G., molybdates, A., 779.

Arany, A. See Kelley, W. P.

Araner, E., determination of the reliability and fermentative powers of wine yeasts, B., 656.

Arbusov, A. E., and Arbusov, B. A., structure of Boyd's chloroanhydride, A., 832

preparation of free radicals of the triarylmethyl series, A., 1053. Arbusov, A. E., and Kamai, G. C., preparation of ethyl phosphinoacetate, A., 1169.

Arbusov, A. E., and Razumov, A. W., syntheses with ethyl phosphinoacetate, A., 1169.

Arbusov, B., chemical composition of Russian turpentine oil from Pinus sylvestris, B., 529.

Arbusov, B. A. See Arbusov, A. E.

Arbusov, G., hydrolysis of leather, B., 140.

See Achard, C.

Archbold, H. K. See Haynes, F.

Archer, B. H., sugar tolerance in arthritis. II. Arthritis of the menopause, A., 1192.

Archer, C. T. See Gregory, H.

Archer, R. S., Fink, W. L., and Aluminum Co. of America,
aluminium-beryllium alloy and its [heat] treatment, (P.), B., 754.

Archer, R. S. Sec also Jeffries, Z.

Arciszewski, W., Czarnecki, E., Kopaczewski, W., and Sznkiewicz, W., electro-capillary phenomena. IV. Rôle of physical fac-

tors, A., 25.

Arend, J. P., determination of best temperature of hydrogenation for bituminous coals, B., 929.

Arend, M. See Schönberg, A.

Arendi, G., and Weicher, O., spinning pump for conveying viscose or other liquids, (P.), B., 391.

Arens, H., and Eggert, J., sensitometry of desensitised films, A., 277.

growth of colloidal silver in gelatin layers, A., 1382

blackening surfaces of two slightly sensitive emulsions, A., 1405.

Ariano, R., compressibility of rubber, B., 612.

Arii, K., vapour pressure of titanium tetrachloride, A., 1226. vapour pressure of thionyl chloride, A., 1226.

Arima, J., constitution of nodakenin, a new glucoside from Peucedanum decursivum, Maxim. I. and II., A., 430, 914.

Aristov, T. V., carbazole, A., 453. Arkel, A. E. van, method of increasing the accuracy of Debye-Scherrer photographs, A., 15.

metallic diffusion, A., 129.

Arkel, A. E. van, and Basart, J., atomic distances in mixed crystals of gold and copper, A., 749.

Arkel, A. E. van, and Bruggen, M. G. van, recrystallisation of aluminium. II., A., 384

Arkel, A. E. van, and De Boer, J. H., chemical combination as an electrostatic phenomenon. I.—XVIII. A., 373, 491, 747,

764, 867, 983, 1129, 1209, 1368. Arkel, A. E. van, De Boer, J. H., and N.V. Philips' Gloeilampenfabr., dissolving a mixture of hafnium and zirconium salts and separating hafnium and zirconium, (P.), B., 682\*.

Arkel, A. E. van, and Ploos van Amstel, J. J., recrystallisation phenomena of zine, B., 327.

Arkel, A. E. van. See also De Boer, J. H.

Arkel, C. G. van, nephelometric determination of pepsins, A., 1490.

Arkhangelski, B. See Dobryanski, A.

Arland, A., comparative results with Arland's potato starch tester and Reimann's potato balance, B., 658.

Armeling, G.K. See Keefer, C.E. Armour, R.W., and Ludlam, E.B., photochemical equilibrium between hydrogen, bromine, and hydrogen bromide, A., 659.

Armour & Co. Sec Powell, J. R.

Armour Fertilizer Works. Sec MacDowell, C. H., and Rupard, E. B.

Armstrong, D., and Dobbie, G. C. G., purification of the wax residues of petroleum and shale oil distillation and apparatus

therefor, (P.), B., 198. Armstrong, E. F., and Hilditch, T. P., seventh report of the Committee on contact catalysis; enzyme catalysts, A., 1488.

Armstrong, F. H. See Smith, J. H. Armstrong, (Miss) H., X-ray diffracting power of copper and iron for molybdenum and copper radiation, A., 1354.

Armstrong, P. A. E., rust-, acid-, and heat-resisting ferrous alloy containing chromium and tantalum, (P.), B., 561.

Armstrong, P. A. E., and Ludlum Steel Co., stable-surface ironehromium-silicon alloy, (P.), B., 23.

Armstrong Cork Co., Humphreys, C. F., and McCarthy, J. C., manufacture of surface coverings particularly for use on floors; manufacture of floor coverings, (P.), B., 210.

Armstrong Cork Co. See also Vogt, C. C.

Arnd, T. See Tacke, B.

Arndt, F., tautomerism of o-nitro-compounds, A., 814. Arndt, F., and Eistert, B., thiochromondiols, A., 326.

Arndt, F., Eistert, B., and Ender, W., syntheses with diazo-VI. Reaction of ketones and aldehydes with diazomethane. mcthane, A., 328.

Arndt, H. J., action of insulin, particularly on cell and tissue metabolism, A., 1495.

Arndt, K., electrolytic precipitation of metals, A., 275.

Arner, W. J. See Orthmann, A. C. Arnett, A. C. See Shawen, E. W.

Arnfelt, H. See Bjurström, T.

Arnold, R. E., and Duncombe, G. H., jun., clay sewer-pipe manufacture. VI. Heat-balance determinations. VII. Low-temperature oxidation [of clays, etc.], B., 644.

Arnoldi, W., influence of the morphine derivative "laudanon" on the metabolism following administration of various kinds of food, A., 1196.

Arnoldi, W., and Ueno, S., effect of dextrose on the metabolism of growing rats, A., 213.

Arnot, F. L. See Ditchburn, R. W.

Arnot, R., hydrolysis of casein or casein-containing bodies, (P.), B., 296.

Arnot, R., and Elektrochemische Fabrik Kempen-Rhein, Brandenburg & Weyland G.m.b.H., production of highly glazed surfaces, (P.), B., 294.

Arnould, J., tower packings and the back-pressure created by their arrangement, B., 419.

Arnovljevic, V. See Stanković, R.

Arny, H. V., and Dimler, M. C., lactic acid tests, A., 793.

Aron, A. See Kohn, M.

Arons, P. See Westenbrink, H. G. K.

Arosnon, E. See Winterstein, A. Arreguine, V., reaction of citric acid and its salts, A., 541.

Arrhenius, O., determination of phosphates [in soil extracts] by the phosphomolybdate method, B., 31.

influence of concentrations of chlorine on development of the sugar cane, B., 32.

relation between different properties of sugar-cane soils, B., 32, 569.

soil acidity and sugar cane, B., 32, 569.

nitrogen question in the sugar industry of Java, B., 32, 758. noxious effect of molasses on soil, B., 32, 758.

physical properties of sugar-cane soils and their value in practical agriculture, B., 569.

reaction of sugar-cane soils in Java, B., 569.

the phosphate question [and crop yields], B., 756.

the chlorine question in sugar-cane culture in Java, B., 758.

has manuring with ammonium sulphate a noxious effect on sugar cane?, B., 758.

value of by-products of carbonate filters as a fertiliser, B., 758. importance of nitrogen nutrition of crops, B., 758.

Arrhenius, O., importance of potash and phosphate nutrition of crops, B., 759.

root rot and soil properties, B., 759.

the phosphate question [in soils]. II. Phosphate analysis, B.,

Arsdel, W. B. van, and Brown Co., waterproofing composition,

(P.), B., 633.

Arsdel, W. B. van, Vannah, H. P., and Brown Co., purification of crude carbon tetrachloride, (P.), B., 427.

Arsdel, W. B. van. See also Richter, G. A.

Arsem, W. C., and Commercial Solvents Corporation, production

of carbon monoxide, (P.), B., 769.

Arsenjeva, (Frl.) A., influence of X-rays on the absorption spectra of alkali halide phosphors, A., 1214.

Arthus, M. [with Boshell, G.], effect of ultra-violet light on proteins, A., 1024.

Arthus, M. [with Collins, H. N. W.], effect of ultra-violet light on some toxins and antitoxins, A., 1024.

Artofex Engineering Works, Ltd., kneading machines [for dough], (P.), B., 188.

Arup, P., composition of Irish butter; distribution of the volatile

acid groups among the glycerides of butter fat, B., 109.

Arvay, A. von, basal metabolism and specific dynamic action after extirpation of adrenals in rats, A., 466.

incretion and avitaminosis. X. Action of thyroxine and pituitary extract on basal metabolism and specific dynamic action after thyroid extirpation and in avitaminosis, A., 475. Arvin, J. A. See Carothers,  $\hat{W}$ . H.

Arzoomanian, S. See Giesy, P. M., and Jones, W. S.

Arzybyschev, S., and Parfianovitsch, L., thermal conductivity of ico, A., 1137.

Asada, T., and Quasebarth, K., removal of gold from cathode

metals in the glow discharge, A., 1246.

Asagi, Y. See Shibata, R.

Asahi Garasu Kabashiki Kaisha. See Ohta, H.

Asahina, T., molecular compound between glycine anhydride and silver nitrate, A., 52.

Curtius and Goebel's glycine anhydride silver, A., 685. spectro-chemical study of amino-acid anhydrides. III.

Light absorption of some N-substituted diketopiperazines and some other amino-acid anhydrides, A., 1362.

Asahina, Y., and Asano, J., constitution of hydrangenol and phyllodulcin, A., 324.

Asahina, Y., and Ihara, S., lichen substances. V. Constitution

of thamnolic acid, A., 818.

Asahina, Y., and Ishibashi, E., hydroxy-β-orcinol [2:3:5-trihydroxy-p-xylene], A., 806.

Asakawa, K., kidney glycerophosphatase, A., 847. Asano, J. Sco Asahina, Y.

Asano, M. See Staudinger, H., and Wieland, H. Asao, S., photo-electric cells of alkali metals, A., 968.

Asaoka, R., 1-chloronitronaphthalenes, B., 972.

Aschan, O., Finnish turpentine. VII. isoDiprene, a new terpene of the sylvestrene group, B., 365.

Aschan, O. [with Petrelius, G. V.], action of metals on per-

sulphates, A., 526.
Ascher, E. See Ruff, O.
Ascroft, P., and Richards, H. E. G., construction of roads or pavements, (P.), B., 817.

Ashcroft, E. A., metallurgy of ores or materials containing tin, (P.), B., 215, 525.

treatment of ores, etc. for the separation of metals and their salts, (P.), B., 945.

Ashcroft, G. A., and Imperial Chemical Industries, Ltd., deton-

ators, etc., (P.), B., 873.

Ashdown, A. A. See Staudinger, II.

Ashe, B., hæmoglobin percentage and the red blood-cell count in Bright's disease, myocardial insufficiency, and hypertension, A., 1481.

Asher, L., and Scheuehzer, W. H., physiology of glands. CXVI. Respiratory metabolism during work under normal conditions and after adrenaline, A., 221.

Asher, L., and Zimmermann, F., physiology of glands. CXIV. Activation of adrenal glands by thyroxine, A., 609.

Asheshov, 1. N., twin tubes with membrane filters, A., 1348. Ashford, C. A., and Holmes, E. G., brain metabolism. V. Rôle of phosphates in lactic acid production, A., 1194.

Ashley, A. E. See Carr, W. M.

Ashley, J. N., and Harington, C. R., derivatives of thyroxine, A., 313.

Ashley,  $K.\ D.$  See Buchanan,  $G.\ H.$  Ashley,  $T.\ J.$  See Carr,  $W.\ M.$  Ashton,  $F.\ W.$  See Lerch, W.

Ashworth, A. A., apparatus for fractional distillation under vacuum, A., 903.

Asiatic Petroleum Co., Ltd., Egerton, A. C., and Barton, C. H., fuel for use in internal-combustion engines, (P.), B., 46. Ask, F., dextrose content of the vitreous humour, A., 209.

Askania-Werke Akt.-Ges., regulation of combustion air in furnaces or the like, (P.), B., 267.

Asken, H. O. See Easterfield, T. H.

Askenasy, P., manufacture of hydrogen peroxide, (P.), B., 52, 206.

Askew, H. O., chemical fogs, A., 259.

Askinasi, D. L., and Jarussov, S. S., liming as a factor in the mobilisation of phosphoric acid in podsol soils, B., 757.

Asmus, E. See Meyer, J.
Aspegren, H., some Mackey tests on cottonseed oil, B., 217.

Assenraad, J. D. B. H. van, determination of uric acid in blood. II., A., 1326.

Associated Electrical Industries, Ltd., and Little, D. G., [cutting of] piezo-electric crystals, (P.), B., 650.

Associated Electrical Industries, Ltd. Sec also Bailey J. N., and Burch, C. R.

Associated Oil Co. See Ihrig, H.K.

Associated Telephone & Telegraph Co., photo-electric plate, (P.), B., 902.

Astafiev, V. I. See Zhadin, V. V.
Astanin, P. P., and Rubel, W. M., conditions for the formation of carbamide in the isolated liver. III., A., 213.

Astbury, W. T., new integrating photometer for X-ray crystal reflexions, etc., A., 745, 902\*.

Astier. See Dubrisay, R. Astin, A., method for measuring the dielectric constants of con-

ducting liquids, A., 1128.

Aston, F. W., mass-spectrum of uranium-lead and the at. wt. of protoactinium, A., 370.

constitution of oxygen, A., 484.

the structure of atomic nuclei, A., 622.

Astrada, V., colouring matters of Carthamus, A., 1348. Aström, A., adsorption of aërosols by solids, A., 1231.

Astruc and Castel, general action of very hard frosts on the chemical composition of wines, B., 619.

Asundi, R. K., new band system of carbon monoxide, A., 118. third positive carbon and associated bands, A., 865.

Asundi, R. K., and Ryde, J. W., vibrational quantum analysis of red cyanogen bands, A., 976.

Asundi, R. K. See also Johnson, R. C.

Aszódi, Z., sulphur content of various serum-globulins, A., 1325. sulphur content of fibrins from various mammals, A., 1325.

Atack, F. W., manufacture of paper and compositions therefor, (P.), B., 13.

Ateliers J. Hanrez, Société Anonyme. See Molle, O.

Ateliers T. Robatel J. Buffaud & Cie., centrifugal separator, (P.), B., 1000.

Aten, A. H. W., electro-osmotic purification of water. II., B., 38. Aten, A. H. W., and Boerlage, (Miss) L. M., determination of conductivity of electrolytes with alternating current of low

frequency, A., 1014. Aten, A. H. W., Boerlage, (Miss) L., and Cannegister, D., threeelectrode lamps in electrochemical measurement, A., 1161.

Aten, A. H. W., Ginneken, P. J. H. van, and Verweij, E., satur-

ation of sugar-lime solutions. III., A., 267.

Aten, A. H. W., and Zieren, M., poisoning of the hydrogen elec-

trode, A., 1246. Athanasiu, G., inversion of the photovoltaic effect by hydroxyl

and hydrogen ions, A., 514. influence of temperature on photo-electric E.M.F., A., 1242.

Atkin, W. R., and Thompson, F. C., acidity of vegetable-tanned leather, B., 865.

Atkin, W. R. See also McCandlish, D., and Thompson, F. C. Atkins, W. R. G., and Poole, H. H., integration of light by photoelectrolysis, A., 659.

uranyl oxalate method of daylight photometry and its photoelectric standardisation, A., 1249

Atkinson, R. B. See Thompson, M. de K.

Atkinson, R. d'E., probability of excitation by electron impact in neon, A., 368.

Atkinson, R. d'E., and Houtermans, F. G., transmutation of the lighter elements in stars, A., 487. possible synthesis of elements in stars, A., 738.

Atlantic Refining Co. See Delbridge, T. G.

Atlas Powder Co. See Brown, K. R., Creighton, H. J., Long, R. A., and Shipley, S. D.

Atmospheric Nitrogen Corporation. See Bramwell, F. H., De Jahn, F. W., Dely, J. G., Greathouse, L. H., and Kniskern, W. H.

Ato, S., potentiometric titration of gallium, A., 416. Atsuki, K., and Honda, N., electrical conductivity of the boiled [washing] water [in the purification] of cellulose nitrate, B., 303. See Schmidt, Erich.

Attia, A. B. G. See Faltis, F.

Atwater, H. A., and Combustion Equipment Co., flue-gas recirculating system for cracking-still operations, (P.), B., 507. Aub, J. C. See Bauer, W.

Aubel, E., relation between the production of lactic acid and the

growth of yeast, A., 471.

Aubel, E., and Cahn, T., rôle of phosphorus in the metabolism of carbohydrate in muscle, A., 1193.

Aubel, E. van, magnetostriction in bismuth, A., 752. viscosity of ether at low temperatures, A., 994.

Aubel, E. van, De Haas, W. J., and Voogd, J., new superconductors, A., 496.

Aubel, E. van. See also De Haas, W. J.

Aubel, R. van. Sec Hadding, A.

Aubert, and Dixmier, G., rapid determination of the permeability and adherence of varnishes used for the protection of light alloys, B., 728.

Aubert, and Pignot, A., protection of light alloys by tars [coumarone and by-products of gasworks], B., 721.

Aubert, and Prot, application of the E.M.F. of dissolution to the

study of light alloys, B., 477.

Aubert, P. F. M., Duval, A. J. P., Duval, H. A. M., and (Aubert & Duval Frères), hardening metal articles by nitrogenisation, (P.), B., 250.

Aubert, R. G., prevention of explosions in liquid air apparatus, (P.), B., 682.

Aubert & Duval Frères. See Aubert, P. F. M.

Auchter, E. C. See Schrader, A. L.

Audibert, E., synthesis of methyl alcohol, B., 162.

mechanism of the carbonisation of coal, B., 501. Audibert, E., and Raineau, A., action of iron catalysts on mixtures of carbon monoxide and hydrogen, B., 840.

Audiffren, M., and Singrun, A., rotary refrigerating machine, (P.), B., 840.

Audubert, R., filtering system, (P.), B., 839.

Auer, L., effect of electrolytes on organic isocolloid systems,

colloid-chemical changes in rubber and fatty oils, B., 611.

treatment of substances containing unsaturated carbon compounds for the purpose of modifying the physical properties thereof, (P.), B., 806.

Auerbach, H., infra-red arc spectra, A., 236.

Auerbach, M., chlorination of the water supply, particularly for tanneries, B., 578.

Auerbach, R., concentration differences of dissolved substances in opposition to osmotic pressure in gels, A., 137.

Auerbach, R., and Chromeplate, Inc., electrolytic deposition of chromium, (P.), B., 401.

Aufhäuser, D., the glass-melting furnace as a heat machine, B., 245.

Aufrecht, distinction between expressed and extracted cacao butter, B., 441.

Auger, P., directions of emission of photo-electrons, A., 114. influence of the level of origin of the photo-electrons on the distribution in space of their initial directions, A., 367. theory of the photo-electric effect, A., 735.

Auger, P., and Skobelzyn, D., nature of the ultra-penetrating rays (cosmic rays), A., 972.

Augmentine Holding Société Anonyme. See Matti, J.

Augmentine Soc. Anon., ccreal food preparation, (P.), B., 416.

Augustine, C. E. See Wicholls, P.
Auhagen, E. See Windaus, A.
Auld, S. J. M., Dunstan, A. E., Herring, P. H., and Anglo-Persian Oil Co., Ltd., apparatus for treatment of liquid hydrocarbons, (P.), B., 509\*

Ault & Wiberg Co., and Miller, A. L., treatment of hydrocarbons to obtain ink or soot, (P.), B., 196.

Ault & Wiborg Co. of New York. See McLeod, E. H. Auméras, M., ionic equilibria. III. Equilibrium between cadmium sulphide and dilute hydrochloric acid, A., 266.

Aupperle, J. A. See Beck, W. J.

Aurelj, A. Scc "Ilva" Alti Forni e Acciaierie.

Aurich, M., [laundry] drum washing and centrifuging machines, (P.), B., 678.

Austerweil, G., manufacture of borneol, (P.), B., 636.

Austin, A. O., [slip] casting of ceramic pieces [electric insulators], (P.), B., 684. Austin, G. R. See Brown, F. W.

Austin, (Sir) H., filters for air and other gas, (P.), B., 460. Austin, M. M. See Engle, E. W.

Austin, R. W., fire-extinguishing liquid, (P.), B., 643.

Austin, W. See Bailey, F. T. Austin, W. E. See Stein, H.

Auter, J. P., gas burners, (P.), B., 771.

Autogen Gasaccumulator Akt.-Ges. See Gas Accumulator Co. (United Kingdom), Ltd.

Auty, C. M., Donald, E. B., Clayton, W. H., and Malm, L. L., treatment of finely-divided caliche in factories "T," "U," and "V," B., 127.

Auwers, K. von, structure of certain phenylated olefines, A., 547. spectrochemistry of a-diketones and ethylene oxides, A., 816. oximes of unsaturated ketones, A., 816.

Auwers, K. von, and Bergmann, F., relative tenacity of organic

radicals, A., 1081. Auwers, K. von, and Cauer, E., pyrazole derivatives of the type of diketopiperazine, A., 75.

 $\Delta^{1}$ - and  $\Delta^{2}$ -pyrazolines, A., 1080. Auwers, K. von, Conrad, J., and Ernecke, A., synthesis and fission of quaternary tetrahydroindazolium salts, A., 454.

Auwers, K. von, Conrad, J., Ernecke, A., and Ottens, B., N-alkyland -aryl-4:5:6:7-tetrahydroindazoles, A., 453.

Auwers, K. von, and Harres, L., constitution of maleic acid, A., 1041.

determination of the configuration of stereoisomeric ethylene derivatives, A., 1218.

spectrochemistry of aliphatic nitro-compounds, A., 1265. Auwers, K. von, and Mauss, W., relative tenacity of alkyl groups

towards nitrogen, A., 75. so-called "o- $\beta\beta$ -dimethylacroylphenol" of S. Skraup, A., 323. Auwers, K. von, and Schaum, K., isomerism of diphenylmethyl-

pyrazoles, A., 1082. Auwers, O. von, crystal structure and ferromagnetism, A., 127.

influence of adsorbed gas on the photo-electric sensitivity of coconut charcoal, A., 367. influence of grain-size on the magnetic properties of iron,

A., 632. magnetic measurements on iron-beryllium alloys, A., 996.

Auwers, O. von, and Weinnoldt, H., theory of Heusler alloys, A., 385.

Avdalian, D., forces between atoms and between molecules. I. Periodicity of interatomic forces, A., 973.

Avdalian, D., and Gapon, E. N., hardening of Portland cement, B., 719.

Avenarius, H., Pscherr, R., and Herz, H., synthesis of dl-apomorphine dimethyl ether, A., 457. Avenarius, R. See Clar, E.

Avenarius Gebrüder, preventing knocking of motor fuel, (P.), B., 348.

Averill, H. P., Roche, J. N., and King, C. G., synthetic glycerides. I., A., 539.

Averkiev, N. D., iodine from Black Sea weeds, A., 1498. Averrett, A. F. See Gen. Electric Co.

Averseng, Jaloustre, and Maurin, action of thorium-X on the content of active principles in certain medicinal plants, A., 477. Avery, O. T. See Heidelberger, M.

Avery, S., carbon and hydrogen determinations using a metal tube, A., 85.

Avery, S., and Maclay, W. D., isomeric  $a\beta$ -diphenylglutaric acids. I. Optically inactive acids. II. Optically active acids, A.,

Avgastinik, A.I. See Alexeevski, E.V.

Avsejevisch, G. P. See Shukov, I. I.

Awbery, J. H. See Griffiths, E.

Axentsev, B. N., effect of some salts on the germination of the seeds of Amarantus retroflexus, L., A., 1345.

Axtell Research Laboratories, petroleum refining process and

reagent for removal of sulphur, (P.), B., 349\*. Aycock, R. V., Harris, W. D., and Refinoil Manufacturing Corporation, refining used [lubricating] oils, (P.), B., 745.

Aycock, R. V. See also Harris, W. D.

Aykroyd, W. R., and Roscoe, M. H., distribution of vitamin-B2 in certain foods, A., 853.

Ayling, E. E., chlorination of phthalic acid in alkaline solution, A., 444.

modification of Baeyer's strain theory, A., 491.

Ayre, J., utilisation of palm leaves, (P.), B., 241.

Ayrer, E., and Hentschel, H., metabolic changes in rickets. II. Carbohydrate metabolism, A., 717.

Ayres, E. E., amyl alcohols from the pentanes, B., 1008.

Ayres, E. E., jun., Haabestad, E. H., and B.A.S. Co., production of gels, (P.), B., 11\*.

production of esters from organic halides, (P.), B., 11\*. hydrolysis of ester-forming compounds, (P.), B., 11\*.

Ayyar, C. S. R., milk-fermenting yeast, B., 69.

Ayyar, C. V. R. See Narayanamurti, D. Ayyar, K. S. V., relative nitrifiability of different nitrogenous organic manures in certain soils of the Central Farm, Coimbatore, B., 106.

Ayyar, P. R. See Mudbidri, S. M., and Paranipe, D. R.

Ayyar, S. K., relative availability of the nitrogen of oil cakes as

indicated by pot-culture studies, B., 106.

Aziz, M. A. Sec Holde, D.

Azogeno Società Anonyma per la Fabbr. dell'Ammoniaca Sintetica e Prod. Derivati, Toniolo, C., and Tanzi, B., manufacture of a non-hygroscopic or slightly hygroscopic double salt from calcium nitrate, (P.), B., 322.

Azot Chemical Factory, Jaworzno, volumetric determination of sodium and potassium ferrocyanides, using zine sulphate solution, A., 416.

B.A.S. Co. See Ayres, E. E., jun., and Haabestad, E. H.

Babasinian, V. S., and Jackson, J. G., mononitro- and dinitro-thiophens. II. Vapour pressures, A., 1077.

В.

Babb, M. F., effect of ethylene on the vitamin-B content of celery, A., 221.

Babcock, H. D., constitution of oxygen, A., 624.

atmospheric oxygen bands, and the relative abundance of the isotopes O<sup>16</sup> and O<sup>18</sup>, A., 971.

revision of the value of e/m derived from measurements of the Zeeman effect, A., 1209.

Babcock & Wilcox Co., furnace walls [for steam boilers], (P.), B., 629.

Babcock & Wilcox Co. See also Molz, J.

Babel, H. C., and Babel, M. L., removing chemicals and moisture from lumber, wood, etc., (P.), B., 56.

Babel, M. L. See Babel, H. C.
Babes, T. See Mezzadroli, G.
Baborovský, J., hydration of ions, A., 883.

Baborovský, J., and Wagner, Alois, electrolytic transport of water in 0·1N-solutions of hydrobromic acid, A., 511.

Baccovich, C. P., cement, (P.), B., 209.

Bach, D., conditions of the action of asparaginase from Aspergillus niger, A., 108.

fermentative hydrolysis of asparagine by the mycelium of Aspergillus niger, A., 472.

Bach,  $\dot{H}$ , simple extraction apparatus for liquids, A., 1035. determination of small quantities of hydrogen sulphide in gases,

B., 422. determination of traces of phenol in water, B., 456.

proposal to render innocuous the waste waters from beet-sugar factories, B., 662.

Bach, M. See Hasenbäumer, J.

Bacharach, A. L., and Jephcott, H., vitamin-D and fæcal reaction,

Bacharach, A. L., and Smith, E. L., chemistry of fat-soluble vitamins in cod-liver oil, A., 726.

Bacharach, G., and Brogan, F., pyridine as a catalyst in Perkin's synthesis of cinnamic acid, A., 185.

Bache, E., and Waldorf Paper Products Co., manufacture of waterproof paper board, (P.), B., 204.

Bachem, A., and MacFate, R. P., effect of X-rays on cholesterol, A., 1249.

Bachér, F., synthesis of truxinic and truxillic acids, A., 445.

Bachman, P. W., and Taylor, G. B., decomposition of nitric oxide by platinum at elevated temperatures and its retardation by oxygen, A., 520.

Bachmann, W., state of copper and iron in alkaline solution in presence of hydroxylic organic substances, A., 260.

Bachmann, W. E., and Shankland, R. V., reduction of phenyl naphthyl ketones by the binary system magnesium-magnesium iodide, A., 316.

Bachmann, W. E. See also Karrer, P.

Bachstein, H. See Leffer, L. G.
Back, E., and Goudsmit, S., Zeeman effect of hyperfine structure and magnetic moment of the bismuth nucleus, A., 1353.

Backer, H. J., formylmethanedisulphonic and bromoformylmethanedisulphonic acids, A., 792

syntheses of bromomethanedisulphonic acid, A., 909. methionic [methanedisulphonic] acid, A., 1165.

Backer, H. J., and Buining, J., sulphopyrotartaric acids. III., A., 49.

Backhaus, A. A., glass plates prolong life of distilling columns, B., 761.

Backhurst, I., absorption of X-rays from 0.63 to 2 Å., A., 376.

Backman, A. See Bergman, G. K.
Bacon, F. S., determination of free sulphuric acid in light-oil

sludge, B., 585.

Bacon, R. F., production of hydrogen sulphide, (P.), B., 393.

Bacsa, J., [electrodes for] alkaline accumulators, (P.), B., 289. Bâculo, A, and Iantria, E, action of the bile and bile acids on serum-lipases in the organism, A., 1325.

Badder, H. C., manufacture of [coloured] cement, (P.), B., 1017. Baddiley, J., Dootson, P., Shepherdson, A., Thornley, S., and British Dyestuffs Corporation, Ltd., manufacture of [vat and acid] dyes, (P.), B., 1009\*

Baddiley, J., See also British Dyestuffs Corporation, Ltd.

Bader, G. See Hieber, W. Bader, J. See Goldschmidt, S.

Bader, M., Sunder, C., Voltz, T., and Durand & Huguenin Société Anonyme, preparation of [leuco-]ester-like derivatives of vat dyes, (P.), B., 846\*.

Bader, W., and Celanese Corporation of America, manufacture of

aliphatic compounds [acetic acid and acetic anhydride], (P.), B., 48\*.

Bader, W. See also Brit. Celanese, Ltd.

Badger, R. M., flame fluorescence and the extinction of fluorescence in gas mixtures at high pressure, A., 866.

Badger, R. M., and Cartwright, C. H., pure rotation spectrum of ammonia, A., 740.

Badger, R. M., and Mecke, R., rotation-vibration spectrum of ammonia, A., 1363. Badger, W. L. See Monrad, C. C.

Badische Anilin & Soda-Fabrik, preparation of derivatives of isatoic anhydride, (P.), B., 11. Badische Maschinenfabrik & Eisengiesserei, cleaning of metal

castings [by water under pressure], (P.), B., 726. Bado, A. A., [corresion of] lead pipes embedded in cement or limo

mortars, B., 943 Bado, A. A., and Trelles, R. A., the phototurbidimeter in the determination of water turbidity, B., 76.

Badoche, M. See Moureu, C. Badstübner, W. See Stollé, R., and Trautz, M.

Baechler, M., and Baechler, Kiser & Cie., vertical drying and dehydrating apparatus, (P.), B., 665\*. Baechler, Kiser & Cie. See Baechler, M.

Bäcklin, E., Eddington's hypothesis and the electronic charge, A., 369.

Bäckström, H.L.J. See Alyea, H.N.

Bähr, K. See Ziegler, K. Bähr, O. See Bauer, K. H.

Backe, M., and Rapatz, F., chromium-manganese steel, (P.), B.,

Baer, E., simple micro-electrodialysis apparatus, A., 25.

colorimetric determination of methylglyoxal, dihydroxyacetone,

Baer, J., manufacture of an elastic caoutchouc-like body, (P.), B., 220, 652.

Bär, K., red- and sheep's fescue, B., 32.

Bär, R., connexion between spark potential and Volta-effect, A., 968

Raman effect from powdered crystals, A., 1361.

Baerner, F., preparation for use as an additive to screened house and street refuse for producing a fertilising and vermindestroying agent and for preventing diseases of crops, or for use in the pure state as a cauterising agent for seeds, (P.), B., 448.

Bäumber, R. See Fischer, Hans. Bäurle, A., See Stollenwerk, W.

Bag, A., action of air on nickel catalyst for oil hydrogenation, B., 102.

Bagasse Products Corporation. See De la Roza, J.J.

Baggesgaard-Rasmussen, H., and Martins, I., ionisation constant of codeine, A., 1009.

Bagley, G. D., Bowditch, F. T., and National Carbon Co., Inc., electrolytic rectifier, (P.), B., 481.

Bagley, G. D., and Carbide & Carbon Chemical Corporation, conducting chemical reactions [manufacture of hydrogen cyanide], (P.), B., 1014.

Baglin, C. A., retardation of carbonisation in coke-oven flues, B., 742.

coke-ovens, (P.), B., 967.

Bagnall, H. H., measurement of the strength of sunlight, A., 407. Baguley, N. G. See Conrtaulds, Ltd.

Bahl, E., reactions of cholesterol, A., 440.

Bahlke, W. H., and Kay, W. B., specific heats of petroleum vapours, B., 1004.

Bahlke, W. H. Sec also Wilson, R. E.

Bahr, H. A., gas analysis apparatus, A., 161.

determination of hydrogen and methane in the Orsat apparatus, B., 310.

Bahr,  $\hat{H}$ . A., and Bahr, T., synthesis of methane from mixtures of carbon monoxide and hydrogen at a nickel surface, A., 169.

Bahr, T. See Bahr, H. A. Bahre, C. E., treatment of plant stems to obtain fibres therefrom, (P.), B., 202,

treatment of stem fibres, (P.), B., 390.

Baier, E., and Barsch, H., examination and evaluation of cray-fish soups, B., 575.

Baier, Ernst. See Schmidt, Walter. Bailar, J. C., jun. See Gomberg, M.

Bailey, A. C., and Woodrow, J. W., phosphorescence of fused

quartz, A., 240.
Bailey, C. H. See Ferrari, C. G., Hayes, H. K., St. John, J. L., and Sherwood, R. C.

Bailey, C. R., Raman and infra-red spectra of carbon dioxide, A., 379.

Bailey, C. R., and Lih, K. H., infra-red emission spectra of Bunsen and allied flames, A., 235.

infra-red emission spectra of separated cones in methane and Bunsen flames, A., 235.

infra-red emission spectra of flames in nitrous oxide, A., 235.

Bailey, C. R. Sec also Wilcox, (Miss) K. W. Bailey, E. G., and Fnller Lehigh Co., refractory arch for furnaces and its production, (P.), B., 816.

Bailey, E. G. See also Fuller Lehigh Co.

Bailey, E. M., Cannon, H. C., and Fisher, H. J., cod-liver oil, A., 103. Bailey, E. M., Nolan, O. L., and Mathis, W. T., denicotinised tobacco, B., 36.

Bailey, F., and Jackson, F. II., [self-cleansing] apparatus for straining liquids, (P.), B., 344.

apparatus for effecting the exchange of heat between fluids,

(P.), B., 579.

Bailey, F. T., and Austin, W., production of white lead, (P.), B., 827\*, 862.

Bailey, F. W., retention of clay in paper, B., 390.

Bailey, H. G. See Mounsey, J. W.

Bailey, J. N., and Associated Electrical Industries, Ltd., heat treatment of pulverulent [carbonaceous] materials, (P.), B., 546. Bailey, K. C., inhibition of chemical reactions. II. Mechanism

of the inhibition of esterification by alkaline substances, A., 151.

Bailey, K. C. See also Riley, F. T. Bailey, P. See Van Dyke, H. B.

Bailey, R. O. See Gray, D.
Bailey, T. L., analysis and constitution of ammoniacal and spent

liquors, B., 717.

Bailey, V. A., and Higgs, A. J., attachment of electrons to the molecules HCl and NH<sub>3</sub>, A., 369.

Bailey, V.A., and McGee, J.D., capture of electrons by molecules, A., 231.

Bailey, W. T., electrolytic cells in chlorination [of drinking water] for the destruction of algæ, B., 1034.

Bailey, W. T. See also Bartow, E.

Baily, T. F., reduction process and apparatus, (P.), B., 361. manufacture of ferrosilicon, (P.), B., 900.

Bainbridge, K. T., search for element 87 by analysis of positive rays, A., 1210.

Baines, H., volumetric determination of silver in the presence of

halides and cyanides, A., 1257.

analysis of photographic products and raw materials. I. Determination of iodide in mixtures of halides. II. Determination of halido impurities in potassium iodide. Ill. Conversion of silver halides into alkali halides. IV. Rapid complete analysis of iodobromide emulsions. V. Stopwatch method for rapid determination of traces of copper in silver nitrate, B., 1050.

Baird, P. K., and Doughty, R. H., bleaching of wood pulp,

B., 390.

Bakelite Corporation, resins of the phthalic anhydride-glycerol type and their preparation, (P.), B., 64. manufacture of laminated products, (P.), B., 64.

phenol resin and its manufacture, (P.), B., 294, 530.

Bakelite Corporation, and Schmidt, J. H., artificial resin compositions, (P.), B., 294.

Bakelite Corporation. See also Bender, H. L., Groff, F., Redman, L. V., Turkington, V. H., Weith, A. J., and Wightman, G. E. Bakelite Ges.m.b.H., production of oil-soluble phenol-aldehyde

condensation products, (P.), B., 333, 484. Bakelite Ges.m.b.H. See also Seebach, F.

corrosion tests for coatings of the iron phosphate type, B., 898. Baker, E. M., and Pettibone, E. E., rapid graphical method for

calculation of steam-distillation problems, B., 579.

Baker, E. M. See also Leslie, E. H., and Pinner, W. L.

Baker, H. B., manipulation in intensive drying, A., 1160.

Baker, J. F., and Westinghouse Electric & Manufacturing Co., rotary-hearth furnace; ear-bottom furnace-hearth seal; furnace, (P.), B., 58. furnace, (P.), B., 381.

Baker, J. L., and Hulton, H. F. E., amylases of cereal grains: oats, A., 1197.

Baker, J. T. See Smith, H. W.
Baker, J. W., mechanism of tautomeric interchange and the effect of structure on mobility and equilibrium. IV. Mechanism of acid catalysis in the mutarotation of nitrogen derivatives of tetra-acetylglucose, A., 889.

alternating effect in carbon chains. XXXI. Directive influence of  $\psi$ -acid systems in aromatic substitution; nitration of  $\psi$ -acidic phenylnitromethanes and their salts, A., 1447.

Baker, J. W., and Ingold, C. K., alternating effect in carbon chains. XXX. Nitration of phenylbromocyanonitromethane; an alleged example of intramolecular meta-rearrangement, A., 546.

Baker, L. C. See Drummond, J. C.

Baker, R. B., and Reid, E. E., action of sulphur on n-heptane and n-butane, A., 789.

Claisen ester condensation with ethyl thioacetate, A., 794. Baker, T. T., and Balmain, W. A., effect of temperature on the sensitivity of photographic plates, B., 871.

Baker, W., substances derived from anhydrocatechin tetramethyl ethers, A., 1076.

Baker, W., Nodzu, R., and Robinson, R., anthoxanthins. X. Synthesis of gossypetin and of quercetagetin, A., 326.

Baker, W., Pollard, A., and Robinson, R., isoflavone group. V. General method applicable to synthesis of derivatives of 7-hydroxyisoflavone, A., 1076.

Baker, W., and Robinson, R., isoflavone group. III. Synthesis of genistein, A., 192

isoflavone group. IV. Synthesis of 2-methylirigenol,  $\Lambda$ ., 325. Baker, W. M., balanced ball mill, (P.), B., 116.

Baker Perkins, Ltd. See Hulme, A. G.

Bakeries Service Corporation. See Patterson,  $C.\ J.$  Bakes,  $W.\ E.$  See Thaysen,  $A.\ C.$ 

Bakken, H. E., high-purity magnesium produced by sublimation,

Bakken, H. E., and American Magnesium Corporation, purification of light metals, (P.), B., 525.

**Bakker**, C.J., anomalous g-values in the spectrum of ionised argon (A 11), A., 364.

Zeeman effect in the spectrum of ionised neon (Ne 11), A.,

Bakker, C. J., De Bruin, T. L., and Zeeman, P., Zeeman effect in the argon spark spectrum (A 11), A., 3, 364. Zeeman effect of the spectrum of ionised argon (A 11), A., 112.

Bakker, C. J., and Zeeman, P., magnetic separation in the spectrum of ionised krypton, A., 1118.

Bakonyi, S. See Dents. Hydrierwerke A.-G.

Bakunin, M., and Vitale, T., phenylisatogen, A., 328. Balaban, I. E., heterocyclic arsenic compounds. III. Derivatives of 4-amino-3-hydroxyphenylarsinic acid, A., 84. 3: 4-methylenedioxyphenylarsinic acid, A., 834.

Balaban, I. E., and May & Baker, Ltd., manufacture of 4-amino-

3-hydroxyphenylarsinic acid, (P.), B., 958.
Balachowsky, D., Caire, P., and Levy, M., producing a combustible charge for use in internal-combustion engines, (P.), B., 312.

Balalucha, V. See Schmuk, A. Balandin, A. A., theory of heterogeneous catalysed reactions; multiplet hypothesis; model of dehydrogenation catalysis, A., 519, 890.

decomposition reactions during catalytic hydrogenation in presence of nickel; rôle of the catalyst in heterogeneous catalysis, A., 772.

theory of heterogeneous catalytic reactions; model of dehydrogenation catalysis, A., 1245.

Balandin, A. A. See also Zelinski, N. D. Bălănescu, C. See Angelescu, E.

Balarev, D., new kind of dehydration, A., 766.

Balaš, F., natural resins and resin acids, A., 1499. Balaš, F., and Brzák, J., preparation of active sandaraco-pimaric acid and its derivatives, A., 811.

isomerisation and catalytic hydrogenation of sandaracopimaric acid, A., 1076.

Balas, F., and Hazuková, R., oleosylvic acid, A., 1040. Balashev, L. L., fertiliser experiments in the Vladimir district, B., 370.

fertiliser experiments in the Moscow district, B., 370.

Balassa, L. See Gilman, H.

Balch, R. T., and Hill, H. G., verification of the 100° point of the

Ventzke sugar scale. I., B., 336.
Balch, R. T., and Keane, J. C., automatic control of the carbonatation process of beet-sugar manufacture, B., 32.

Baldesehwielder, E. L., and Cassar, H. A., new petroleum byoctanesultone [lactone of y-hydroxy-n-octanesulphonie acid], A., 1423.

Baldracco, G., modified shaking method for analysing tannins and

the Darmstadt apparatus, B., 485.

Baldwin, C. See Sherrill, M. L. Baldwin, J. T., additive quality of oil absorption [of pigments], B., 443.

Baldwin, R. T., Chlorine Institute standard valves for chlorine

containers under 15 tons capacity, B., 596.

Balen Walter, B. C. van, the Schmid-Bondzynski-Ratzlaff method for determining fat in cheese, B., 415.

Balke, C. W., and Fansteel Products Co., Inc., means of obtaining

vacua [in vacuum tubes], (P.), B., 62.

[stabilising the output of a tantalum-lead-sulphuric acid] electrolytic rectifier, (P.), B., 606. rectifier electrode, (P.), B., 902.

Balks, R. See Hasenbäumer, J.

Ball, A. See Krüger, F.

Ball, F. E. See Hudson, O. F.

Ball, R. W. [with Harris, J. A.], extraction of commercial rareearth residues with a view to the concentration of illinium, A., 1026.

Ball Bros. Co. See Grafflin, L.

Ballard, C. W., determination of fat in malted milk powders,

Ballard, W. E., manufacture of lined metal containers, (P.),

Ballanf, F., and General Aniline Works, Inc., sulphur dyes from dihydroindole-indophenolic bodies, (P.), B., 846\*.

Ballay. See Guillet, L.

Ballay, M., cathodic yield in nickel-plating with high current density; influence of oxidising agents and hydrogen-ion concentration, B., 287.

rapid copper-plating of steel with a thin intermediate nickel deposit, B., 478.

Balle,  $\hat{G}$ . See Grasselli Dyestuff Corporation, and I. G. Farbenind. A.-G.

Balls, A. K., and Wolff, W. A., optical activity of  $\psi$ -morphine, A., 202.

determination of morphine in biological material, A., 215.

Balls, A. K. See also Waldschmidt-Leitz, E.

Balmain, W. A. See Baker, T. T.

Balut, R. R., dyeing or colouring the hair of a pelt, (P.), B., 51. Baly, E. C. C., and Hood, N. R., photosynthesis of naturally occurring compounds. IV. Temperature coefficient of the photosynthesis of carbohydrates from carbonic acid, A., 408. Baly, E. C. C. See also Pollopas, Ltd.

Baly, E. J. See Pollopas, Ltd.
Balz, G. See Balz-Erzöstung Ges.m.b.H., and Erzröstung Ges.m.b.H.

Balzer, F., and Troy Laundry Machinery Co., Inc., centrifugal extractor, (P.), B., 307.

Balz-Erzröstung Ges.m.b.H., calcining of zinc blende, etc., (P.),

Balz-Erzröstung Ges.m.b.H., and Balz, G., mechanical [multihearth ore-roasting] kilns, (P.), B., 821 mechanical [ore-roasting] kilns, (P.), B., 856

Bamag-Meguin Akt.-Ges., [sand] filters, (P.), B., 308.

screening plant [with mass-balanced screens], (P.), B., 762. Bamann, E., and Schmeller, M., kinetics of ester hydrolysis by enzymes. I., A., 1197.

Bamann, E. See also Kestner, O., and Willstätter, R. Bamberg, K., exchangeable potassium [in soils], B., 788.

Bamberger, C. See Schmidt, R. E.

Bamberger, E., and Elger, F., photochemistry of nitrated benz-aldehydes. II., A., 1449.

Banbury, F. H., mixing machines for rubber compositions, etc., (P.), B., 295. Baucelin, J. See Delconrt.

Bancroft, F. E. See Burch, C. R.
Bancroft, W. D., induced reactions, A., 1019.
Bancroft, W. D., and Allen, R. P., photochemical temperature coefficients, A., 892.

Bancroft, W. D., and Barnett, C. E., adsorption of methylene-blue by lead sulphate, A., 1140.

Bancroft, W. D., and Davis, H. L., binary solutions of consolute liquids, A., 255. Raoult's law, A., 638.

b. p. of aqueous solutions, A., 647.

Bancroft,  $\hat{W}$ . D., and Jones, N. C., electrolysis with fluorine, A., 658.

Bancroft, W. D., and Morton, D. S., monatomic iodine and molecular hydrogen, A., 893.

Bancroft, W. D., and Nugent, R. L., synthetic kidneys, A., 503. copper oxide in the borax bead, A., 777.

manganese equilibrium in glasses, B., 472. Band, W., and Maddock, A. J., X-ray tube with detachable ends and electrodes for X-ray spectroscopy, A., 671. Bandini, F., manufacture of bricks, (P.), B., 396.

Bandli, M., carbon paper, (P.), B., 470.

Bandov, F., formation of phosphorescence centres in calcium sulphide, A., 9.

Banerjea, K.N. See Sen, R.N. Banerjee, H.K. See Guha, P.C.

Banerjee, K., X-ray diffraction in liquid alloys of sodium and potassium, A., 750.

Banerjee, P. C., qualitative analysis of a mixture of ferrocyanide, ferricyanide, and thiocyanate, A., 785.

Banerjee, S. N. See Ghosh, S.

Banerji, P. See Rây, P. Bangert, F. See Fischer, Franz.

Bangert, H., and Hühn, G., regenerative furnace, (P.), B., 77.

Bangham, D. H., and Lewis, D. R., effect of gases on the electric charges developed by heated metals, A., 989.

Bangham, P. F., Thomas, J., and Scottish Dyes, Ltd., production of substituted benzoyl halides, (P.), B., 427.

Banholzer, W. See Windisch, W.

Banigan, T. F. See Bassett, H. P.
Bankes, C. H., and Lange, A. R., iodine values of menhaden fish. oil, B., 689.

Banks, H. P. See Laucks, I. I. Banks, H. W. See Jones, L. C. See Laucks, I. F.

Banks, R. F., direct vitreous coating of surfaces such as walls, constructional ironwork, roofing, fencing, etc., (P.), B., 285. Bannau, W., effect of cadmium on mechanical properties of brass,

B., 99.

Bannick, E. G., and Greene, C. H., renal insufficiency associated with Bence-Jones proteinuria, A., 1482

Bannister, C. O., crystallisation of gold from the liquid state. A., 1132.

Bannister, F. A., so-called "thermokalite" and the existence of sodium hydrogen carbonate as a mineral, A., 535.

Bannister, L. C., surface oxidation of aluminium, tungsten, and molybdenum, A., 157.

Bannister, L. C. See also Evans, U. R. Bannister, W. I., and Commercial Solvents Corporation, manufacture of esters, (P.), B., 427.

Bannister, W.J. See Woodruff, J. C. Bannon, J., and Brose, H. L., motions of electrons in ethylene, A., 115.

Banov, A. See Dumanski, A. V. Bansen, H. See Krupp A.-G. Friedrich-Alfred-Hütte, F.

Banta, H. E., mobility of positive ions in flames, A., 369.

Banti, G. See Passerini, M.

Bañuelos, T., and Sherman, P. L., fermentation as affecting the quality of Philippine abacá, B., 166.

Baranov, W. J., and Stschepotjeva, E. S., application of Ebert's ion counter to the determination of the number and mobilities of small ions in the atmosphere, A., 6.

Baranovski, K., construction of electroplating vats or troughs, (P.), B., 26.

Barbato, A. See Viterbi, E. Barber, H. J., diphenylaminearsinic acids. I. Derivatives of diphenylamine-4-arsinic acid, A., 584.

derivatives of arylthioarsinous acids, A., 833.

thiolacetamide as a reagent for identifying arsinie acids, A., 833.

nitration of halogenophenylarsinic acids, A., 1471. Barber, N. E. See Gen. Electric Co., Ltd.

Barber, T. W., autoclaves, (P.), B., 192. mixing apparatus, (P.), B., 307.

Barber Asphalt Co., curing cementing materials, (P.), B., 56. Barber Asphalt Co., and Davis, A. B., metallic alloy, (P.), B., 524, 686

[nickel-chromium] metallic alloy [resistant to nitric acid], B., 857.

Barber Asphalt Co. See also Hayden, H. P.

Barbet, E. A., apparatus for continuous preliminary treatment of crude benzols, (P.), B., 47\*.

continuous rectification of [hydrocarbons and other] liquids of high b. p., (P.), B., 771\*.

Barbler, G. See Demolon, A. Barbler, J. See Guntz, A. A.

Barbieri, G. A., volumetric determination of cobalt, A., 416. new type of rare-earth salts, A., 1026.

ferrocyanomolybdates and analogous compounds of ruthenium and osmium, A., 1254.

Barbour, H. G., and Winter, J. E., antipyrctic action and toxicity of combinations of magnesium with phenylcinchonic acid, A., 721.

Bărbulescu, F. See Rădulescu, D.

Barbulescu, N., quantum theory of gases and solutions, A., 744. relation between surface energy of liquids and saturation pressure, A., 1141.

Barclay, E. H. See Patrick, W. A.

Barcroft, J., hæmoglobin and its biological significance, A., 713. Bardenheuer, P., and Thanheiser, G., pickling of mild steel sheets,

Bardenheuer, P., and Zeyen, K. L., heat and material balance of

some melts in the Brackelsberg furnace, B., 942.

Bardhan, J. C., 1:3-dicarbonyl compounds. I. Mechanism of cyanoacetamide and cyanoacetic ester condensations, A., 1462. Bardorf, C. F., cane-wax complex in juices from cane-sugar mills, B., 449.

Bardt, H., extraction of halogens and precious metals from seawater, (P.), B., 540. Bardwell, D. C. See Lind, S. C.

Barfuss-Knochendöppel, H.-R. See Chemnitius,  $F_{\cdot \cdot}$ , and

Bargellini, G., 2:6-dichlorophenetidine, A., 438, 553\*.

Bargellini, G., and Leone, P., 3:5-dichlorophenotidine, A., 438. Bargellini, G., and Monti, (Signa.) L., a[3]-phenylcoumarins, A., 451.

2:5-dichlorophenetidine, A., 552.

Barger, G., and Coyne, F. P., amino-acid methionine; constitution and synthesis, A., 175.

Barger, G., and Silberschmidt, R., constitution of laurotetanine, A., 80.

Barger, W. R., and United States, treatment of fruit to prevent decay, (P.), B., 376. Barich, H. See Kaufmann, H. P.

Barjot, H., utilisable natural energy, B., 39.

Barkan, G, and Berger, E, differentiation of the labile iron of blood by means of its reaction with carbon monoxide and oxygen, A., 87.

Barkan, G., and Leistner, W., iodine in blood and gland secretions after administration of iodoproteins, A., 1195.

behaviour of iodine in body fluids after ingestion of alkali iodides and iodoproteins, A., 1334.

Barker, E. F., moleoular spectrum of ammonia. II. Double band at 10  $\mu$ , A., 740.

intensities of lines in the ammonia band at 2  $\mu$ , and the form of the ammonia molecule, A., 1363.

Barker, E. F. Sec also Stinchcomb, G. A.

Barker, S. G., and Tunstall, N., apparatus for autographic records of the strength and elongation of textile fibres and yarns, B., 318.

Barker, T. V. See Read, J.

Barkla, C. G., and Sen-Gupta, M. M., superposed X-radiations. IX. J-Phenomenon, A., 629

Barkley, J. F., the sulphur problem in burning coal, B., 5.

Barkworth, H., Meanwell, L. S., and Taylor, M. G. D., bacterial content and keeping quality of milk, B., 492. Barlow, H. M., electron theory of metals, A., 496.

mechanism of metallic conduction, A., 1225.

Barlow, H. S. See Williams, E. J. Barlow, O. W., and Biskind, M. S., effect of magnesium sulphate or lactoso on blood volume in normal, beri-beri, and fasting pigeons, A., 97.
Barlow, O. W. See also Whitehead, R. W.
Barnabe, L. V., vaporising apparatus, (P.), B., 876.
Barnes, A. H. See Davis, B.
Barnes, A. S. L. See Dobson, W. P.

Barnes, B. T., total radiation from polished and soot-covered nickel, A., 1354. properties of carbonised tungsten, B., 521.

Barnes, J., absorption spectrum of liquid benzene, A., 625.

Barnes, J., and Fulweiler, W. H., shift in the 1.14  $\mu$  absorption band of some benzene derivatives, A., 864.

Barnes, J. W., sampling apples in the orchard for the determination of arsenical spray residue, B., 263.

Barnes, O. A. See Adams, R.

Barnes, R. B., fine structure of infra-red absorption in organic compounds and the Raman effect, A., 1127.

Ltd., dyes [anthraquinoneaeridones] and dyeing (P.), B., 317. Barnes, R. S., Harris, J. E. G., Thomas, J., and Scottish Dyes,

dyos and dyeing [sulphuric osters of leuco(?)-4:4'-dibenz-anthronyls], (P.), B., 674.

production of sulphuric anhydride compounds of tertiary bases and the application of the products, (P.), B., 888.

dyes [soluble esters of leuco-vat dyes] and dyeing, (P.), B., 890.

Barnes, R. S., Harris, J. E. G., Wylam, B., Thomas, J., and Scottish Dyes, Ltd., dye intermediates [dry leuco-compounds] (P.), B., 636.

production of [vat and acid] dyes [anthraquinoneaeridones], (P.), B., 809.

Barnett, C. E. See Bancroft, W. D.

Barnett, E. de B., and Goodway, N. F., synthesis of meso-alkyl and meso-aryl anthracene derivatives. V. and VI., A., 312, 1171.

ms-alkylanthracenes and "transannular tautomerism." V., A., 448.

9-benzhydrylanthrone and isodianthranyl, A., 700.

Barnett, E. de B., and Wiltshire, J. L., ms-dialkylanthracenes and "transannular tautomerism." VI., A., 1289.

Baron, E. See Phillips, A. Baron, J. T., and Clarke, J. B., separation of dust from boiler flue gases, (P.), B., 702, 876. washing flue gases, (P.), B., 741.

Baroni, A. See Levi, C. R.
Barr, D. P., Glaser, J., and Ronzonl, E., inhibitory action of panereatic extract on glycolysis. I. Effect of inhibitor on glycolysis of muscle-tissue and extract. II. Effect of inhibitor on glycolysis of malignant tumours, A., 216.

Barr, G., gas circulating pump, A., 166.

Barr, G. See also Rooney, T. E. Barral, P. See Cade, A.

Barratt, J. O. W., anticoagulant action of antithrombin, A.,

Barratt, S., and Stein, C. P., bromine chloride, A., 411. Barratt, S. See also Walter, J. M.

Barratt, W. R. See Rial, W. D.

Barraud, M. H., detection of adulteration in oil of turpentine, B., 292.

Barrenscheen, H. K., and Frey, M., detection of minute amounts of bismuth in urine, A., 1480.

Barrenscheen, H. K., and Messiner, L., chemical characterisation of serum-proteins, A., 1095.

Barrett, F. L. See Bleachers' Association, Ltd.

Barrett Co., and Brandon, G. E., distillation of tar and recovery of products therefrom, (P.), B., 507.

Barrett Co., McCloskey, G. E., and Wingert, W. B., production of pitch, (P.), B., 803.

Barrett Co., and Miller, S. P., distillation of tar, (P.), B., 633, 803, 880, 970, 1006.

coke-oven by-product recovery system, (P.), B., 667.

distillation of [tar] oil, (P.), B., 880. dehydration of tar, (P.), B., 970.

recovery of condensates from coal-distillation gases, (P.), B., 1040.

Barrett Co., and Osborne, F., distillation of tar, (P.), B., 633. Barrett Co. See also Cushing, D., Hagens, J. F. C., and Miller, S. P.

Barringer, L. E. See British Thomson-Houston Co., Ltd.

Barritt, J., and King, A. T., sulphur content of wool. II. Distribution of sulphur along the fibre, variation with colour, and effect of exposure to ultra-violet light. III. Effects of chemical

processing on sulphur content, B., 846.

Barron, E. S. G., blood-cell metabolism. III. Effect of methylene-blue on oxygen consumption of eggs of sea urchin and starfish; mechanism of the action of methylene-blue, A., 460. blood-cell metabolism. IV. Effect of methylene-blue on

metabolism of leucocytes, A., 1324.

Barron, E. S. G., Flexner, L. B., and Michaelis, L., oxidation-reduction systems of biological significance. III. Mechanism of the cysteine potential at the mercury electrode, A., 514.

Barron, E. S. G., and Harrop, G. A., jun., blood-cell metabolism. V. Metabolism of leucocytes, A., 1324.

Barron, E. S. G., See also Harrop, G. A., and Michaelis, L.

Barrows, W. P., spotting of plated or finished metals, B., 820.
Barry, T. H., Malayan lumbang oil, B., 1021.

Barsch, H. See Baier, E.

Barsky, G., and American Cyanamid Co., production of substituted guanidines, (P.), B., 916.

Barsky, G., Freise, F. W., and American Cyanamid Co., fertiliser, (P.), B., 572.

Barsky, G. See also Buchanan, G. H.
Barsov, K. K., and Korolkov, K. N., sewage purification by intermittent land irrigation at Lublino (Moscow), 1914—1923, B., 1033.

Barsutzkaja, S. Sco Glassmann, B. Bartel, C., Euler, H. von, and Myrbäck, K., formentation and growth in dry yeast-cells. II. A., 1199.

Bartell, F. E., and Fu, Y., adsorption from aqueous solutions by silica, A., 757.

Bartell, F. E., and Sloan, C. K., interferometric investigation of adsorption by pure carbon from non-aqueous binary systems, A., 999.

adsorption by pure carbon from non-aqueous binary systems over the entire concentration range, A., 999.

Bartels, H., rigid theory of diffusion of electrons in gases, A.,

Bartels, W. See Plücker, W.

Barth, G., influence of outgassing the cathode on the cathode fall, A., 1357.

Barthe, L., and Dufilho, determination of chlorine and sodium in sheep's milk, B., 262.

Barthel, C., and Sadler, W., casein-splitting properties of starters [in ripening of cheese], B., 300.

Barthêlemy, H., and Société Industrielle des Matières Plastiques, manufacture of condensation products of urea with formaldehyde, (P.), B., 256.
Barthelemy, H. L. See Ruth-Aldo Co., Inc.

Barthelmess, E., means for simultaneous drying and grinding, (P.), B., 496.

grinding and crushing, (P.), B., 1000.

Bartholomew, R. P., effect on soil reaction of nitrogenous fertilisers under the anaërobic conditions of rice production,

availability of nitrogenous fertilisers to rice, B., 831.

Bartholomew, R. P., and Janssen, G., luxury consumption of potassium by plants, A., 1498.

relation between concentrations of potassium in culture solutions and optimum plant growth, B., 408.

Bartholomew, R. P. See also Janssen, G.

Bartky, W., and Dempster, A. J., paths of charged particles in electric and magnetic fields, A., 863, 972.

Bartlett, E. P. See Leatherman, M. Bartlett, J. H., jun., ionisation by slow electron impact of ammonia and hydrogen sulphide, A., 379.

property of superconducting metals, A., 871. Bartlett, R., and Poulter, T. C., rate of evaporation through

surface films, A., 258.
Bartlett, R. M. See Pearce, J. N.

Bartlett, S., studies in milk secretion based on the variations and yields of butter fat and milk produced at morning and evening milkings, A., 342.

normal day-to-day variability of yield of milk and fat of individual cows, A., 1099.

Bartlett, W. J., chemistry in incandescence lamp manufacture, B., 1020.

Bartling, F., and Lawaczeck, F., separating constituents of loose mixtures particularly of liquids, vapours, and gases, (P.), B., 191.

Bartling, F. See also Honigmann, L.

Barton, C. II. See Asiatic Petroleum Co., Ltd.

Barton, L. E., Kinzie, C. J., and Titanium Pigment Co., Inc., production of titanic oxide, (P.), B., 556.

Barton, L. J., protective compositions for lining metal moulds, (P.), B., 215.

manufacture of resistance-surface or abrasive-resisting alloys and castings, with special reference to a cast-metal grinding ball, (P.), B., 249.

Barton, W. H., and Blue Diamond Co., slaking lime and producing

hydrate of lime, (P.), B., 816. Barton-Wright, E. C. See Dorée, C.

Barton-Wright, G. C., and Boswell, J. G., biochemistry of dry-rot in wood, A., 478.

Bartow, E., and Bailey, W. T., manganese in Iowa City waters,

Bartram, T. W., Roberts, H. P., and Rubber Service Laboratories Co., manufacture of alkali xanthates, (P.), B., 939. Bartsch, O., tenacity of the system clay-water, B., 1016.

Barns, C., chemical reaction in the interferometer U-gauge,

A., 288. Bary, J. See Cournot, J.

Bary, P., figures produced by the desiccation of colloidal solutions, A., 136.

Bary, P., and Rubio, J. V., colloidal solutions of alumina and chromium oxide and their desiccation, A., 392. desiccation of colloidal solutions of alumina and chromium

oxide, A., 760.

pectography of colloidal solutions of metallic sulphides, A., 1004.

Basart, J. See Arkel, A. E. van.

Basart, J. C. M. Sco Burgers, W. G.

Basch, E.J. See Schumacher, E.E. Basch, R. See Braune, H.

Bascou. Sec Quillard.

Basel, G. See Kaufler, F.

Bass, L. W. See Levene, P. A.

Bassett, A. J., and Bruce MacBeth Engine Co., oil-gas apparatus, (P.), B., 198, 588.

manufacture of oil-gas, (P.), B., 588. Bassett, H. L., and Taylor, K. F., reactions of a mixture of ethyl ether, acetyl bromide, and naphthol, A., 1063.

Bassett, H. P., treatment of cellulose and cellulose ester filaments, (P.), B., 810.

production of sodium hydrogen sulphide, (P.), B., 813.

Bassett, H. P., Banigan, T. F., and Meigs, Bassett, & Slaughter, Inc., manufacture of cellulose products, (P.), B., 774.
Bastedo, G. M., and Irving, L., inorganic phosphorus of frog

muscle in relation to lactacidogen and phosphagen, A., 93. Baster, G. F., manufacture of splinterless glass, (P.), B., 395.

Bastian-Morley Co., gas burners, (P.), B., 971.

Bastlan-Morley Co., and Morley, J. P., [water] heating apparatus, (P.), B., 461.

Bastings, L., temperature coefficient of y-ray absorption, A., 371.

Bastow, S. H. See McAulay, A. L.



Basu, K. P., primary process of light absorption and activation in photochemical reactions, A., 1022.

photochemical reaction between cinnamic acid and chlorine in carbon tetrachloride solution, A., 1023.

Basu, S. See Kichlu, P. K.

Basu, T. See Datta, R. L. Basu, U. See Sen, H. K.

Bataafsche Petroleum Maatschappij, and Limburg, H., manufacture of emulsifying and stabilising agents and dispersions obtained therewith, (P.), B., 805.

Bataafsche Petroleum Maatschappij. See also Schönfeld, J. F. P.Batchelder, W. H., tests of frost action on concrete, B., 96

Batcheller, H. G., Kelley, J. O., and Ludlum Steel Co., manufacture of materials [steel] containing tungsten, (P.), B., 524.

Batchelor, R. D., drying apparatus for hops and similar material, (P.), B., 954.

Bate, D. F., washing artificial silk skeins and other similar material, (P.), B., 894.

Bateman, C. S., treatment [separation of leaf and stalk] of tea, B., 995.

Bates, J. R., irradiated quenching of cadmium resonance radiation, A., 156.

Bates, J. S., manufacture of chemical pulp, (P.), B., 204. Bates, L. T., hydrogenation of coal, (P.), B., 87. Bates, P. K., factors affecting the growth of surface colonies of bacteria, A., 608.

Batey, R. A. See Lea, F. C.

Batson, R. G., and Tapsell, H. J., properties of materials at high temperatures; strength at elevated temperatures of low-carbon steels for boiler construction, B., 778.

Battegay, M., [preparation of] derivatives of s-m-xylenol, B., 163

Battegay, M., Buser, H., and Schlager, E., crystalline diglycide and its acetate, A., 539, 1165\*.

Battegay, M., and Calco Chemical Co., dyeing and printing, (P.), B., 514.

Battegay, M., and Lichtenberger, J., [properties of] chrome colours on wool, B., 715.

Battie, M. A., and Maclean, I. S., catalytic action of cupric salts in promoting oxidation of fatty acids by hydrogen peroxide, A., 1270.

Battig, R. E., generating hydrogen [by decomposition of hydro-

carbons], (P.), B., 851\*.

Battin, W. I. See Humphreys & Glasgow, Ltd.

Batuecas, T., Rancaño, A., and Ibarz, J., densities of the alkalineearth carbonates, A., 873.

Batuecas, T. See also Moles, E. Baudisch, O., and Euler, H. von, phthalein reaction of certain mineral waters, A., 1417.

Baudrenghien, J., 1:2-dimethylcyclopropanes, A., 801, 1286\* Bauer, E., Lavrovski, K. P., and Skujin, E., correlation between oxygen capacity and the total hæmoglobin content, A., 86.

Bauer, E. See also Weygand, C.

Bauer, F., production of coloured woollen and worsted materials in two or more harmonious shades, (P.), B., 1012.

Bauer, Hans, refraction of material waves from the point of view of special relativity theory, A., 234.

Bauer, Hans. See also Jauncey, G. E. M.

Bauer, Hugo, and Becker, Johanna, compounds of the nature of germanin " (Bayer 205), A., 1437.

Bauer, Hugo, and Strauss, E., substituted proteins; nitration and iodination of globin, A., 1322.

determination of tyrosine and of tryptophan by the method of Tillmans, Hirsch, and Stoppel, A., 1324.

Bauer, K. H., determination of organically combined sulphur in sulphonated oils, B., 403.

Bauer, K. H., and Bähr, O., oxidation of simple and complex unsaturated fatty acids and hydrocarbons with perbenzoic acid. A., 1040.

Bauer, K. H., and Schenkel, P., [constituents of] euphorbium

resin, B., 137.

Bauer, K. H., and Schub, E., [a constituent of] Lactucarium germanicum, A., 1181.

Bauer, L. H., and Berman, H., friedelite, schallerite, and related minerals, A., 787.

loseyite, a new Franklin mineral, A., 1264.

mooreite, a new mineral, and fluoborite from Sterling Hill, N.J., A., 1264.

Bauer, L. H. See also Larsen, E. S., and Palache, C.

Bauer, O., influence of bismuth on the mechanical properties of lead, B., 100.

Bauer, O., and Hansen, M., influence of a third metal on the constitution of brasses. I. Lead, A., 874.

Bauer, W., and Aub, J. C., inorganic salt metabolism. I. Methods, A., 1101.

Bauer, W., Aub, J. C., and Albright, F., calcium and phosphorus metabolism. V. Bone trabeculæ as a readily available reserve supply of calcium, A., 718.

Bauer, Wilhelm. See Grasselli Dyestuff Corp.

Bauer Bros. Co. See Mechlin, R. S., and Mechlin, W. H.

Baughman, W. F., and Jamieson, G. S., chia seed oil, B., 902. Baughman, W. F., Jamieson, G. S., and McKinney, R. S., American reindeer fat, B., 784.

Baum, F., Berthollet's explosive silver and the formation of silver mirrors, A., 777.

Baum, G., and Niagara Electro Chemical Co., Inc., heating liquids electrically, (P.), B., 440.

Baum, K. M., separating sulphur from other materials, (P.), B., 54. Bauman, M., alkali-refining of castor oil, B., 528.

Baumann, E. See Fischer, Hans, and Scheibler, H. Baumann, F. See Jacobi, J.

Baumann, K. See Windisch, W.

Baumann, P. B. See Trautz, M.

Baume, G., Chambige, P., and Boutier, D., manufacture of emulsions or suspensions [for roads, etc.], (P.), B., 325.

Baumeler, C., mol. wt. of proteins, especially of the homocyanin of the blood of the snail (Helix pomatia), A., 1008.

Baumeler, C. See also Dhéré, C.

Baumert, P., and Hermsdorf, L. G., [feeding air-steam mixture into drums for] oxidation of articles to be dyed with aniline oxidation black, (P.), B., 895.

Baumgartel, H. See Weygand, C. Baumgarten, P., aminosulphonic acid and its trisubstituted

derivatives, A., 663. Baumgartner, L., King, E. J., and Page, I. H., decrease in bonephosphatase in overfeeding with irradiated ergosterol, A., 1497

Baumhör, A. See Elstermann, O. Baumler, R. See Fischer, H.

Baur, E., relation between stationary state and equilibrium, A., 396. equations for sensitised photolysis, A., 892.

Baur, E., and Schnyder,  $\hat{H}$ ., [colour-]lake formation and cotton dyeing, B., 470.

Bauschinger, C. See Täufel, K. Bavendamm, W., oxidases of wood-destroying moulds. I., A., 724.

Baver, L. D., drift in potential of the quinhydrone electrode [for soil measurement], B., 408. Baxter, G. P., and Ishimaru, S., at. wts. of terrestrial and meteoric

nickel. III. Analysis of nickelous bromide, A., 863.

Baxter, G. P., and Starkweather, H. W., density, compressibility, and at. wt. of argon. II., A., 873. Baxter, G. P., Starkweather, H. W., and Ellestad, R. B., leakage of helium through pyrex glass [at 0°], A., 903.

Baxter, W. C., extraction of mercury from cinnabar, (P.), B., 754. Baxter, W. P., and Dickinson, R. C., mechanism of the photochemical decomposition of nitrogen pentoxide, A., 276.

Bay, Z., and Steiner, W., oscillating discharges in hydrogen, A., 2. relationships of the hydrogen spectra under various conditions of excitation. I. The spectra in the oscillatory discharge and in the Paschen hollow cathode, A., 111.

velocity of combination of hydrogen atoms, A., 403.

spectroscopic method for the proof of the existence of unstable intermediate products in activated gases, and its application to active hydrogen, nitrogen, and oxygen, A., 733. active nitrogen, A., 863, 1359.

Bay, Z. See also Steiner, W.

Bayer, E. C., porous building material, (P.), B., 209.

Bayer, O. See Braun, J. von.

Bayer, R. See Bredig, G.

Bayerische Stickstoff-Werke Akt.-Ges., apparatus for the production of ammonium sulphate, (P.), B., 516.

Bayerische Stickstoff-Werke Akt.-Ges., See also Popov, M.

Bayerl, A. See I. G. Farbenind. A .- G.

Bayle, E., and Amy, L., determination of fluosilicate and fluorine ions, A., 529.

Bayley, P. L., coloration of kunzite and hiddenite by X-rays, A., 123.

Bayley, P. L., effect of X-rays on the infra-red absorption of kunzite and hiddenite, A., 1363.

Baylis, J. R., hydrogen-ion control in water-softening, B., 38. activated carbons and their use in removing objectionable tastes and odours from water, B., 624.

Baylis, J. R., and Leeds & Northrup Co., tungsten electrode for determining [hydrogen] -ion concentration, (P.), B., 1021.

Baylis, W. S., and Filtrol Co. of California, decolorising and refining crude cottonseed oil, (P.), B., 862.

Bayliss, L. E., Fee, A. R., and Ogden, E., method of oxygenating blood, A., 205.

Baylocq, F. See Landrieu, P., and Moureu, C.

Bazett, H. C., Haldanc apparatus for small volumes of gas, A., 109.

Bazett, H. C., and Sribyatta, L., gas tensions in tissues affected by local temperatures, A., 86.

Bazin, E. V. Sec Rabinovitsch, I. M. Bazzoni, C. B., Faust, and Weatherby, densitometric measurements of the Ka line of carbon, A., 630.

Bazzoni, C. B. See also Cornog, I., and Gehman, S. D.

Beaber, N. J. See Gilman, H., and Roos, A. T. Beach, A. C. G., oiling of plates for ultra-violet photography,

Beach, D. K., and Riley Stoker Corporation, single-zone pulverising apparatus, (P.), B., 875.

Beach, G. F., and Ryan & Co., F. J., furnace, (P.), B., 77. Beal, C. L. See Sheppard, S. E.

Beale, E. S. L., Coxon, G. H., Dunstan, A. E., and Anglo-Persian Oil Co., Ltd., pressure cracking treatment of liquid hydrocarbons, (P.), B., 746\*.

Beall, F. H. See Bradner, D. B. Beall, I. N. See Rue, H. P.

Beals, E. A. See Shepard, W. L.

Bean, P., jun., and Rowe, F. M., effects of after-treatments on the degree of aggregation, location, shade, and fastness properties of insoluble azo-colours on the fibre, B., 429.

Beard, H. H. See Rapport, D. Beard, R. F., and Taylor, N. W., kinetics of the oxidation of iodide ion by acid dichromate solutions in presence of a neutral salt, A.,  $10\overline{17}$ . Bearden, J. A., wave-length of the K lines of copper using ruled

gratings, A., 984.

Beardmore, A. O. T., treatment of leather, (P.), B., 30, 406\*.

Beattie, J. A., equation of state for gaseous mixtures. ation to mixtures of methane and nitrogen, A., 253.

Beattie, J. A., and Bridgeman, O. C., equation of state for gaseous mixtures. II. Application to helium, neon, argon, hydrogen, nitrogen, oxygen, air, and methane. III. Normal densities and compressibilities of several gases at 0°, A., 252.

Beattie, J. H., and Jackson, A. M., preservation of peanut butter, (P.), B., 1030.

Beaucourt, K., constitution of resins. I. Boswellic acid from olibanum (frankincense), A., 1457.

Beaumont, A. B., and Knudsen, H. R., computation of no-filler fertiliser mixtures, B., 448.

Beaumont, A. B. See also Larsinos, G. J.

Beaumont, G., and Mansio, G., absorption refrigerating apparatus, (P.), B., 545.

Beaver, C. J., and Glover & Co., Ltd., W. T., impregnating paper for insulation of electric cables and apparatus therefor, (P.),

Beaver, J. J., colorimeter for determination of hydrogen-ion concentration, A., 418.

Beavis, J. A. F., production of phosphorescent or luminous compositions, (P.), B., 64.
Beavis, J. A. F. See also Schindelmeiser, J.

Bechdel, S. I., Honeywell, H. E., Dutcher, R. A., and Knutsen, M. H., synthesis of vitamin-B in the rumen of the cow, A., 104.

Bechhold, II., and Schnurmann, R., determination of width of pore of earthenware filters by means of the systems air-liquid and liquid-liquid, A., 903.

Beck, A. J. See Mohlman, F. W. Beck, C. Sec I. G. Farbenind. A.-G.

Beck, G., spectrography at the temperature of liquid air, A., 534.

molecular energy and structure, A., 1219.

Beck, J. W. See Emeléus, K. G.

Beck, K., and Casper, E., flesh proteins of various animals, B., 375.

Beck, P., distribution of recrystallisation centres in stretched tin strips, A., 871.

Beck W., corrosion of metal pipes by direct and alternating currents, B., 132.

torsion viscosimeter for paints, B., 785. Beck, W. J., Aupperle, J. A., and American Rolling Mill Co., enamelling metal, (P.), B., 399.

Beckenkamp, J., fine structure of the chemical elements, A., 1222. Becker, Heller's test for blood in urine, A., 1480.

Becker, A., passage of slow cathode rays through metals. II., A., 970.

Becker, A., and Stehberger, K. II., adsorption of radium emanation, A., 484.

Becker, Alfred, and Salmang, H., gases in glass. II. Gas and moisture content of glasses, B., 473.

Becker, A. E., Boehm, A. B., and Standard Oil Development Co., leather oil and its manufacture, (P.), B., 615.

Becker, A. E. See also Standard Development Co., and Standard Oil Development Co.

Becker, C. A., and Kraft, C., composition and hydrolytic stability of moulded glass, B., 1044.

Becker, E., methods for the determination of the nutrient requirement of soils for phosphate and potash, B., 654.

determination of soil nutrient deficiencies, B., 951.

Becker, E. See also Csiky, J. von. Becker, E. H. See Martus, M. L. Becker, G. See Valentiner, S.

Becker, H. See Patent-Treuhand-Ges. f. elektr. Glühlampen m.b.H.

Becker, J., agar product, (P.), B., 623.

Becker, J., and Koppers Co., coking retort oven, (P.), B., 314\*, 464, 771\*.

coking of coal in a retorting space, (P.), B., 464.

Becker, J. See also Koppers Co. Becker, Johanna. See Bauer, Hugo.

Becker, J. A., life history of adsorbed atoms and ions, A., 756.

Becker, J. E. See McCollum, E. V.

Becker, K., system tungsten-carbon, A., 141.

Becker, L. B. See O'Neil, L. J.
Becker, T. See I. G. Farbenind. A.-G.
Becker, W. T. L., and Oliver, L. W., light-sensitive films or carriers therefor, (P.), B., 960.

Becker, W. T. L., Oliver, L. W., Murray, H. D., and Colour Photographs (British & Foreign), Ltd., subtractive colour photography, (P.), B., 960.

Becker, W. W. See Popov, S.

Beckers, M., vacuum contraction of density bulbs, A., 1034.

Becket, F. M., anode for chromium plating, (P.), B., 781. Becket, F. M., and Electro Metallurgical Co., zirconium-treated iron-chromium alloy, (P.), B., 176.

[nickel-molybdenum-iron] alloy, (P.), B., 524. manufacture of tungsten alloys low in tin and arsenic, (P.), B., 562.

Becket, F. M., and Oxweld Acetylene Co., welding rod, (P.), B., 60.

Becket, F. M., Read, W. C., and Electro Metallurgical Co., smelting of tungsten ores, (P.), B., 525.

Beckett, E. G., Thomas, J., and Scottish Dyes, Ltd., preparation

of dyes derived from diphthalimidoanthraquinones, (P.), B., 512\*.

Beckett, E. G., Woodcock, W. G., Thomas, J., and Scottish Dyes, Ltd., manufacture of halogenoaminoanthraquinones [1-chloro-5-

aminoanthraquinone], (P.), B., 673. Beckett, E. G. Sce also Fairweather, D. A. W. Beck-Friis, C. Sce Angel, G. Beckman, H. C. See Rushton, A. L.

Beckman, J. W., extraction of oils, (P.), B., 608.

Beckmann, C. O. See Taylor, T. C. Beckmann, H., securing the adhesion of bodies of dense, hard, or soft caoutchouc to other articles, (P.), B., 30.

Becquerel, J., introduction to a theory of magneto-optical phenomena in crystals, A., 1124\*, 1134.

Becquerel, J., and De Haas, W. J., separation of the Faraday effect into two phenomena of different origin; diamagnetic and paramagnetic rotatory polarisation; law of magnetisation of a crystal; Bohr's magneton, A., 383.

fundamental law of paramagnetic magnetisation of a crystal, and the law of paramagnetic rotatory dispersion, A., 633,

1134.

Becquerel, J., and Do Haas, W. J., law of magnetisation of solid crystals; resolution of the Faraday effect into two effects of different origin; diamagnetic and paramagnetic rotation of the plane of polarisation, A., 752.

law of the paramagnetic rotation of tysonite and tables of the paramagnetic rotatory power of some crystals, A., 1134. Becze, G. von. Sec Szelényi, G. von. Beddous, P. J. Sec Vandervell & Co., Ltd., C. A.

Bedel, C., solubility of silicon in hydrofluoric acid, A., 756. conditions of solubility of silicon in hydrofluoric acid, A., 756. oxidisability of silicon and its solubility in hydrofluoric acid, A., 997.

influence of catalysts and of heating the silicon on solubility of silicon in hydrofluoric acid, A., 1399.

Bedford, C. S., dyeing machines, etc., (P.), B., 205, 281. Bedos, P., conversion of a six-ring into a five-ring with magnesium bromide etherate, A., 1064.

Bedos, P., and Ruyer, A., dehydration of cyclohexene oxide and transformation of the cyclohexaue to the cyclopentano ring,

Bedworth, H. A., resistance of copper-silicon-manganese alloys to corresion by acids, B., 779.

Bee, J. W. Sco Woodman, H. E.

Beech Nut Packing Co., jelutong products and their production, (P.), B., 182

Beecher, H. U. See Cady, H. P.
Beecroft & Partners, Ltd. See Castle, G. C.
Beekley, J. S., and Lazote, Inc., production of hydrogen, (P.), B., 557.

Beeman, N. See Harkins, W. D.

Beesley, E. See Allmand, A. J.

Beeth, C. C., treatment of [oil-soaked] hemp waste, (P.), B., 638. Beetlestone, N. C., interstitial liquid and [yeast] cell moisture, B., 533.

Beetz, G., universal siphon, A., 44. Beghin, P. See British Alizarine See British Alizarine Co., Ltd.

Behnken, H., liberation of electrons by means of X-rays, A., 114.

Behr, H. See Pfeiffer, P. Behr, H. C., apparatus for separating liquids and solids, (P.), B., 1036.

Behre, J. A., rapid determination of acetone and acctoacetic acid in urine, A., 594.

Behre, J. A., and Benedict, S. R., occurrence and determination of ergothioneine in human blood, A., 714.

Behren, W. von. See Traube, J. Behrend, (Frl.) G. See Pietsch, E.

Behrendt, H., and Berberich, J., action of "vigantol," A., 1112. Behrendt, K., drying of hops in vacuo, B., 299.

Behrens, B., pharmacology of lead. IV. Mechanism of lead poisoning of fishes, A., 97.

Behrens, B., and Anton, G., pharmacology of lead. III. Distribution of lead between blood and tissue after intravenous

injection, A., 97.

Behrens, H. See Terres, E.

Behrens, M. See Feulgen, R.

Behrens, W. U., graphical representation of the buffering power of soils, B., 141.

comparison between the culture methods of Mitscherlich and Wiessmann [for determining nutrient values of soils], B., 183. Behrman, A. S., laboratory experiments with a foaming boiler

water, B., 873.

Beijer, P. H., 2-bromo-3-hydroxybenzoic acid, A., 1294.

Beisler, W. H. See Williamson, B. F.

Beisswenger, O. See Meisenheimer, J. Beitter, H. See Merl, T.

Bek, E. G., and Thoma, E., production of finished metal articles, (P.), B., 563\*. Bek, I. J. See Waldschmidt-Leitz, E.

Bekk & Kaulen Chemische Fabrik. G.m.b.H., etching of [metallic] printing forms for intaglio printing, planographic printing, etc., (P.), B., 687.

Bekkedahl, N. See Blum, W.

acid soil extracts, B., 259.

Belaiev, N. T., inner structure of the pearlite grain [in steel], B., 1045.

Belden,  $E.\ T.$  See Nahikian,  $K.\ M.$  Bělehrádek, J., and Nečásova, V., resistance of the nematode, Anguillula aceti, Ehrenberg, to various protoplasmic poisons, A., 470. Belfanti, S., relation of lipins to proteins and immunity, A., 340. Belgrave, W. N. C., colorimetric determination of phosphorus in Belgrave, W. N. C., percolation experiments. I. Nitrification and effect of cover plants, B., 905.

rapid approximate method of determining the exchangeable bases in non-calcarcous soils, B., 905.

Belhommet, H., treatment of the yolk of eggs, (P.), B., 376. Beliaiev, N., oil from seeds of Erucastrum elongatum, B., 608.

Belinfante, A. H. See Jorissen, W. P.

Belknap, C. B., means for treating oils, (P.), B., 466.

Belknap, C. B. See also Kirsehbraun, L. Belknap, F. L. See Kirsehbraun, L.

Belknap, F. L. Soe Kirsehbraun, L. Bell, E. V., and Bennett, G. M., stereoisomerism of disulphoxides and related substances. III. Pairs of aromatic disulphoxides, A., 179.

stereoisomerism of disulphoxides and related substances. IV. Di- and tri-sulphoxides of trimethylene trisulphide, A., 293. Bell, E. V., Bennett, G. M., and Mann, F. G., isomeric trithio-

acetaldehydes, A., 1042.

Bell, F., diethylaminocthanol esters of diphenyl-2-carboxylic acid and derivatives, A., 185.

Bell, F. K., infra-red absorption spectra of organic carbonates,

A., 119.
Bell, J. E., and Sinclair Refining Co., distillation of petroleum oils, (P.), B., 9.

operation of pressure stills [for cracking of hydrocarbon oils, etc.], (P.), B., 233.

cracking of hydrocarbons, (P.), B., 507.

apparatus for condensing hydrocarbon vapours, (P.), B., 1006. Bell, M., composition of human milk, A., 91

Bell, M., Long, M. L., and Hill, E., available carbohydrate content of some fruits and vegetables, B., 375.

Bell, R. P., influence of adsorbed films on rates of evaporation, A., 258.

Bell, W. T., and Bennett, J. F., apparatus for grinding coal and similar material, (P.), B., 509.

Bell Telephone Laboratories, Inc., treatment of magnetic materials,

[refining of] nickel and nickel alloys, (P.), B., 250. coating of articles [insulated wire], (P.), B., 293.

methods of enamelling and apparatus therefor, (P.), B., 294. insulating materials [for under-water cables, etc.] and their production, (P.), B., 401, 481.

Bell Telephone Laboratories, Inc. See also Cioffl, P. P., Elmen, G. W., and White, J. H.

Bellamy, A. J., and Egg Patents, Ltd., preservation of [egg-] albumin, (P.), B., 737.

Bellay, J., continuous production of pure hydrogen, (P.), B., 95. Bellecci, V. See Minunni, G. Belliot, H., development after fixation of inverted or solarised

photographic plates, B., 151.

influence of the nature of the fixing agent on the development after fixation of inverted or solarised photographic plates, B., 189.

Bell-Irving, R., and Sandwell, P., condensate removing systems [steam trap], (P.), B., 192.

Bellis, A. E., salt baths [for heat-treatment of metals], (P.), B., 858.

Bellwood, R. A. See Downs, C.

Belopolsky, M. A. See Orloy, N. A. Belsley, J. P. See Marvel, C. S. Belz, W. See Freudenberg, K.

Bemberg Akt.-Ges., J. P., production of artificial threads by the cuprammonium stretch-spinning process, (P.), B., 390, 975. [trough for hardening-liquid in] manufacture of artificial silk, (P.), B., 429.

fastening devices for spinning centrifuges used in production of artificial silk, (P.), B., 429.

treatment of artificial silk and articles made thereof for rendering same water-repellent, (P.), B., 514.

production of artificial silk by the stretch-spinning process, (P.), B., 750.

machines for spinning artificial silk, (P.), B., 976.

Bemmann, R. Sec Berl, E.

Bena Median, V. See Ostrogovich, A. Benabeng, H. See Crassons, J.

Benade, W., soil examination by means of conductivity measurements, B., 182. Benade, W. See also Stockfisch, K.

Bénard, H. See Tissier, M.

Benary, E., aromatic hydroxymethylene ketones and their derivatives, A., 68.

Bénazet, P. Sec Michel, A.

Bencker, F. See I. G. Farbenind, A.-G.

Benekiser, T., Reimann, A., and Reimann, A., jun., production of a disodium phosphate having two molecules of water of crystallisation, (P.), B., 642.

Benda, L., Schmidt, Werner, and Winthrop Chemical Co., Inc., alkoxyacridines, (P.), B., 661\*.

Bender, H. L., and Bakelite Corporation, phenol [-formaldehyde] resin composition, (P.), B., 691\*.

Bender, K. See Leuchs, H. Bender, W. A., and Certo Corporation, fruit product; [preparation of pectin from apples], (P.), B., 338. Bendien, S. G. T., and Janssen, L. W., scrum-proteins and complex

ions, A., 207.

Bendien, W. M. See Reinders, W.

Bendix Brake Co., method and apparatus for welding, (P.), B., 823. Benduski, H. See Grimmer, W.

Benedek, L. von. Sco Windisch, IV. Benedetti-Pichler, A., gravimetric analysis with Kuhlmann's micro-balance [determination of aluminium], A., 1259.

Benedicenti, A., and Bonino, G. B., modern development of the theory of solutions and its significance in biology. I., A., 265.

thermodynamic activity and biological action. I. Disinfecting power and activity of the mercury ion, A., 356.

Benedicks, C., treatment of liquids, (P.), B., 192.

Benedicks, C., and Sederholm, P., microscopical studies of a passive layer in carbon steel and the resulting etch structure, B., 21.

Benedicks, C. See also Sederholm, P.

Benedict, H. C., use of aniline in preparing amino-acids, A., 1048.

Benedict, H. C. See also Dailey, H.T.

Benedict, S. R., purification of picric acid, A., 730, 924. determination of sugar in blood, A., 1096.

Benedict, S. R., and Nash, T. P., jun., origin of urinary ammonia, A., 953.

Benedict, S. R., and Newton, E. B., molybdic acid as a precipitant for blood-proteins, A., 714.

tungstomolybdic acid as a precipitant for blood-proteins, A., 1189.

non-sugar reducing substances of blood and urine. I. Glutathione and ergothioncine in blood, A., 1189.

Benedict, S. R. See also Behre, J. A.

Benesch, E., rapid determination of selenium, A., 42.

analysis of organic mixtures, A., 1093. Benetato, M. See Nitzescu, I. I.

Bengtsson, E., band spectra of aluminium hydride, A., 119.

origin of the ultra-violet beryllium hydride band spectrum, Ă., 490.

Bengtsson, E., and Grundström, B., new zinc hydride bands in the ultra-violet, A., 1118

Bengtsson, E., and Hulthen, E., experimental test of the combination principle for band spectra, A., 374.

Bengtsson, E, and Rydberg, R, new cadmium hydride bands in the ultra-violet, A., 1352.

Benham, H. J., [electric kiln, etc. for] manufacture of cement and lime, (P.), B., 852.

Benin, G. S., storing beets by drying, B., 831.

Benjamin, C. S., and General Chemical Co., manufacture of hydrogen chloride and sodium sulphate, (P.), B., 94.

Benjamin, L. R., and Somerville, J. L., paper pulp and cellulose from the eucalypts by the sulphite process, B., 49.

Benner, H. P. See Egloff, G., and Morrell, J. C.

Benner, R. C., and National Carbon Co., Inc., electrolytic apparatus, (P.), B., 481.

Benner, S., characteristic oscillation of free electrons in a constant

magnetic field, A., 367.

Bennet-Clark, T. A. See Dixon, H. H.

Bennett, A. N. C. See Laporte, Ltd., B.

Bennett, C. T., and Seaber, W. M., commercial civet, B., 188.

Bennett, C. W., and Noyes, W. A., optically active diazo-compounds. IV. Stable alicyclic diazo amine, A., 1290. Bennett, C. W. Sce also Hurd, C. D.

Bennett, G. M., and Heathcoat, F., derivatives of aliphatic glycols, A., 421.

Bennett, G. M., and Pratt, W. L. C., 2:4-dinitrobenzaldehyde as a reagent, A., 1070.

Bennett, G. M., and Willis, G. H., structure of organic molecular compounds, A., 436.

Bennett, G. M. See also Bell, E. V.

Bennett, J. F. See Bell, W. T.

Bennett, R. A., ore-roasting retort furnace, (P.), B., 821.

Bennett, W. G. See Distillers Co., Ltd.
Bennett, W. H., purification of methyl fluoride; quantitative gas analysis by high-dispersion infra-red spectroscopy, A., 420. Bennett, W. H., and Meyer, C. F., infra-red absorption spectra of

the methyl halides. A., 239.

Bennett, Inc. See Clapp, A. L. Bennetter, S. J., production from magnesia cement of articles

resistant to chemical attack, (P.), B., 520.

Bennewitz, K., and Andreeva, N., experiments in the critical region. III. Energy determinations by means of the Joule cffect, A., 873.

Bennewitz, K., Wagner, C., and Kuchler, K., transport numbers and ionic mobilities in mixed solutions of electrolytes and their interpretation in terms of the Debye-Hückel-Onsager theories, A., 1390.

Bennewitz, R. See Müller, Erich. Benning, A. F., stirrer for gas absorption, A., 166.

Bennion, F., Plant, H. J., and Clarke, J. B., ovens or kilns for firing pottery and other ware, (P.), B., 96. Bennis, A. W., furnaces, (P.), B., 267.

turbulent burners, (P.), B., 805.

[grates for] furnaces, (P.), R., 1035. Benoy, M. J., respiration factor in the deterioration of fresh vegetables at room temperature, B., 736.

Benrath, A., isotherms of the ternary system containing water, alkali sulphate, and a sulphate of the vitriol type, I., A., 1238. Benrath, A. [with Mienes, K., Steinrath, H., and Andreas, K.],

solubility of complex cobalt and chromium precipitates. I., A., 256.

Benrath, A., and Ammer, G., thallous double halides, A., 267 Benrath, A., and Benrath, H., heterogeneous equilibria at 97° in systems containing water, sodium sulphate, and sulphates of the vitriol type, A., 650.

Benrath, H. See Benrath, A.

Bensa, F. See Pongratz, A., and Zinke, A.

Bent, L. N., and Hercules Powder Co., blasting explosive, (P.), B., 539.

Benthall, E. E. See Bird & Co. Benthin, G. See Walther, R. von.

Benton, A. F., and Elgin, J. C., synthesis of water with a silver catalyst. II. Energy of activation and mechanism, A., 274.

Benzon, B. See Bertrand, G.

Beran, F. See Köck, G. Berat, A., determination of [organic] arsenic compounds adapted to their study in the organism, B., 870.

Berberieh, J. See Behrendt, H. Berend, G. See Pietsch, E.

Berenstein, F., biochemistry of the sense organs, A., 1097.

distribution of the enzymes in the organs and tissues of the

animal body, A., 1098.

Bereslavsky, E. V., and Ethyl Gasoline Corporation, low-compression fuel, (P)., B., 548\*.

Berezický, S. See Heyrovský, J.

Berg, C. P., and Rose, W. C., tryptophan and growth. I. Growth

on a tryptophan-deficient basal diet supplemented at intervals

with tryptophan, A., 843.

Berg, C. P. See also Cox, G. J.

Berg, H., and Vogt, E., coal-dust firing for boilers and industrial furnaces, B., 422

Berg, H. O. See Michel, G.

Berg, L., hydrates of lithium chlorate, A., 1145.

Berg, P., and Stockert, L., [examination of] foreign wines under the quartz lamp, B., 953. Berg, P. See also Kirkton, A.

Berg, R., determination and separation of metals using 8-hydroxyquinoline. VII. Determination of iron, manganese, nickel, and cobalt; separation of iron from aluminium, manganese, and alkaline-earth metals; separation of manganese from nickel, zinc, and alkaline-earth metals, A., 286.

Berg, W. E. See Jillings, C. S.

Bergamaschi, (Signa.) M., absorption of carbon dioxide by roots and its utilisation in chlorophyllic photosynthesis, A., 728. Bergauer, J. See Bureš, E.

Bergdolt, A., Neelmeier, W., Nocken, T., and General Aniline Works, Inc., manufacture of sulphur dyes, (P.), B., 1009\*. Bergé, J., colloid chemistry in relation to sugar manufacture, B.,

desaccharification of syrups and molasses, (P.), B., 489.

Bergeim, F. H. Sec Du Pont de Nemours & Co., E. I.

Bergel, F., triquinoyl, A., 567.

Bergel, F., and Widmann, E., constitution of dicyclopentadienes, A., 53.

Bergell, C., saponification of fats and oils, (P.), B., 650. Berger, detection of benzene with dracorubin, B., 344.

Berger, D., influence of electrolytes on the activity of specific diuretics and on the normal secretion of urine, A., 1104.

Berger, E. See Barkan, G.
Berger, E. E., calcium sulphate retarders for Portland cement clinker, B., 919.

Berger, F., "internal cycle" of iodide in man, A., 1334.

Bergh, A. A. H. van den, porphyrin modalities, A., 596.

Bergh, A. A. H. van den, and Hijman, A. J., porphyrin, A., 717.

Bergh, Z. van der. See Jagt, B. G. H. van der.

Bergius, F., obtaining hydrogenation gas from hydrogenating carbon and hydrocarbons from gases containing methane and

hydrogen, (P.), B., 235\*.

Bergman, G. K., the cellulose industry and its products, B., 90.

Bergman, G. K., and Backman, A., cellulose fibre-length, B., 713.

Bergman, W. G., Ogden, D. P., and Plumb, E. F., furnace and method of treating bodies therein, (P.), B., 267.

Bergmann, E., and Hervey, J., occurrence of free, substituted

methylenes in chemical reactions, A., 695.

Bergmann, E., and Mark, H., explanation of Schlenk's isomerism, A., 689.

Bergmann, E. See also Schlenk, W.

Bergmann, F. See Auwers, K. von.
Bergmann, L., and Düring, W., change of the dielectric constant of a highly rarefied gas by means of electrons, A., 742.

Bergmann, M., structure of the higher carbohydrates, A., 427. action of common salt on [raw] hide, B., 140.

tannin analysis, B., 756.

Bergmann, M., and Breuers, W., unsaturated reduction products of sugars. XI. 2-Deoxycellobiose (cellodesose) and derivatives of 2:3-bisdeoxycellobiose. XII. Reduction products of sugars,

Bergmann, M., Du Vigneaud, V., and Zervas, L., transformations of peptide-like substances. XXVIII. Syntheses of peptides containing arginine; d-tyrosyl-d-arginine and its anhydride, A., 1284.

transformations of peptide-like substances. XXIX. Acyl migrations and hydrolytic processes with diketopiperazines,

Bergmann, M., and Jacobi, B., solidification of gelatin, B., 950. Bergmann, M., and Koch, F. K. V., preparation of mixed acetyl-

ated sugars, A., 428.

Bergmann, M., Köster, H., and Zervas, L., transformations of peptide-like substances. XXVII. Structure of clupcine; autoraccmisation of anhydrides of amino-acids containing arginine, A., 1283.

Bergmann, M., and Miekeley, A., structure of bimolecular lactolides, A., 1276.

Bergmann, M., Miekeley, A., and Lipmann, E. von, associating lactolides; transformations of aldols, A., 911.

Bergmann, M., and Stather, F., red and blue stains on damp chrome[-tanned] leather, B., 1047.
Bergmann, M., Stather, F., and Seligsberger, L., changes in the

swelling of hide during chrome tanning, B., 925.

Bergmann, M., and Zervas, L., catalytic racemisation of amino-

acids and peptides, A., 431. Bergmann, W., structure of protein materials, A., 836.
Bergmann, W. See also Kok, F., and Windaus, A.

Bergquist, J. G., manufacture of cement from slag, (P.), B., 980.

Bergavist, R., determination of a- and  $\beta$ -cellulose, B., 279. Bergwerksverband zur Verwertung von Schutzrechten der Kohlen-

technik G.m.b.H. See Bomke, H. Berkel, C. F. M. van, absorption refrigerating apparatus, (P.), B., 840.

Berkenblit, S. E., rapid determination of sp. gr. of semi-solid

bituminous substances, B., 271.

Berkenheim, A. M., new regularities in the series of the elementary ionic radii, A., 487.

Berkhout, P. J. T. van, basal metabolism of inhabitants of the

tropics, A., 955.

Berkmann, J., adsorption and tanning properties of synthetic tannins, B., 405.

Berkson, J. See Reed. L. J.

Berl, E., reactions [and corrosion phenomena] at high pressures, B., 419.

Berl, E., manufacture of activated carbon, (P.), B., 465.

Berl, E., Heise, K., and Winnacker, K., oxidation of motor fuels, B., 158, 546.

Berl, E., Hoffmann, K., and Bemmann, R., nitrometer without rubber connexions for semi-micro-chemical work, A., 1033.

Berl, E., and Ravis, L., use of interferometry in science and technology, B., 343.

Berl, E., and Schmittner, P., action of water-soluble mono- and di-phosphates on permutite, in connexion with the fixation of phosphoric acid in the soil, B., 406. Berl,  $\tilde{E}$ , and Schupp, H., cellulose ethers [alkylated celluloses],

B., 278.

Berlin, D. W., treatment of slags containing metals obtained in the production of ferrochromium from ores, (P.), B., 524.

Berlin, H., and International Patents Development Co., manufac-

ture of pinacol, (P.), B., 577. Berline, R. M. See Jeannin, R.

Berliner, E., and Rüter, R., dielectric measurements as a rapid means of water determination, A., 512.

Berliner, R. See Grasselli Dyestuff Corporation. Berlingozzi, S., arsenical azo-derivatives, A., 1471.

Berman, H. See Bauer, L. H., Larsen, E. S., and Palache, C. Bermejo, L., and Blas, L., electrosynthesis of hydrocarbons, A.,

Bermejo, L., and Rancaño, A., catalysis of the combustion of sulphur in organic substances, A., 890.

Bernal, J. D., metallic state, A., 987.
Bernard, A. T. See Ionesco, D.
Bernard, H. B., and Sinclair Oil & Gas Co., apparatus for recovering gasoline, (P.), B., 745.

Bernardi, A., composition of the enamel of teeth, A., 90. new green compounds of cobalt. II., A., 160.

Bernardi, B. See Parisi, E.

Bernauer, C. See Bodnár, J. Berndt, F. See Riesz, E.

Berndt, K., bisulphite liquors containing magnesia, B., 895.

Berner, E., refraction constants and solution volumes of some organic compounds in aqueous solution, A., 504.

Bernhard, L., possible origin of uric acid, A., 718.

Bernhard, R., and Demann, W., hydrogenation of tar oil, (P.), B., 235\*.

Bernhard, R., and Traylor Engineering Co., ball mill, (P.), B., 913. Bernhardt, H., determination of iodine in urine by the palladous chloride method, A., 593.

Bernhardt, W., retarded luminescence observed in air, A., 5.

Bernhauer, K., characterisation of the group of Aspergillus niger. II. Importance of acid substrates for the characterisation and growth of the mould, A., 472.

reaction between sugars and their degradation products and nitrogenous substances. I. Formation of glyoxalines, A.,

oxidative decomposition of sugars. III. Theory of sugar degradation. IV. Behaviour of dextrose in sulphuric acid

solution, A., 1167.

Bernhauer, K., and Görlich, B., oxidative decomposition of sugars. VII. Transformation of methylglyoxal, A., 1426.

Bernhauer, K., and Nistler, J., oxidative decomposition of sugars. II. Action of hydrogen peroxide on dextrose, etc. in presence

of calcium carbonate, A., 543.

Bernhauer, K., and Schön, K., citric acid formation by moulds.

III. Theories of citric acid formation and the appearance of acctaldchyde in the mould cultures, A., 218.

oxidative decomposition of sugars. I. Action of "chloramine-T " on dextrose, A., 297.

oxidations by Bacterium xylinum. II. Formation of gluconic and 5-ketogluconic acids [from dextrose], A., 355.

Bernhauer, K., and Wolf, H., oxidative decomposition of sugars. VI. Degradation of dextrose into C<sub>3</sub> chains by alkaline-earth carbonates, A., 1426.

Bernhauer, K. See also Meyer, Hans.

Berninger, E. See Schwab, G. M.

Bernitz Furnace Appliance Co., gas generators, (P.), B., 8.

furnace walls and bricks therefor, (P.), B., 325.

Bernstein, C., and Ulzer, F., hydrazido of ik-dihydroxystearic acid; s-bisdihydroxyheptadecylcarbamide, A., 432.

Berriman, J. W., evaluation of wood pulp, B., 390.

Berry, A. J., quantitative oxidation with ceric sulphate, A. 1159.

Berry, H. R., Smith, E. H., and Lang, F. R., determination of the sp. gr. of asphalt by means of a hydrometer, B., 766.

Berry, P. A., determination of eincole in eucalyptus oil; with special reference to the crude oil obtained from Eucalyptus cneorifolia, B., 538.

Berry, P. A. See also Bickford & Sons, Ltd., A. M.

Berry, Wiggins & Co., Ltd., and Holmes, H. H., manufacture of electrical insulating and filling materials, particularly liquid materials, (P.), B., 859.

Bersch, H. W. See Bruchhausen, F. von.

Bersin, T. See Meerwein, H.

Bert, L., and Anglade, M., synthesis of propyl- and propenyl-

benzene and their homologues, A., 1433.

Bertel, E., determination of hexamethylenetetramine in cerebrospinal fluid, A., 91.

Bertel, E. See also Philippi, E.

Bertelsmann, W., examination of coal in small and large gas-works, B., 1002.

Berthêlemy, P., and De Montby, H., aluminium alloys and their manufacture, (P.), B., 60.

Berthelot, C., chemical utilisation of coal, B., 344.

Berthelsen, K. C., microbiology of aqueous solutions, A., 355.

Bertho, A., acetic fermentation, A., 1492. Bertho, A. See also Wieland, H.

Berthold, H. See Grasselli Dyestuff Corporation.

Berthon, R., and Société Civile pour l'Étude de la Photographie et de la Cinématographie en Couleurs, film for lenticular-screen colour photography, (P.), B., 798\*.

Berthoud, A., theory of catalysis, A., 519. photochemistry of the halogens, A., 1151.

physico-chemical properties of ethanesulphonic and methanesulphonic acids, A., 1371.

photochemical action of complex and intermittent light, A., 1404.

Berthoud, A., Briner, E., and Schidlof, A., ebullioscopic paradox, A., 635.

Bertleff, V., pickling of iron and steel, (P.), B., 176. Bertram, J., hard-metal alloy for [cutting] tools, (P.), B., 1019.

Bertram, S. H., analytical remarks on vitamin-A, A., 1202.

Bertram, S. H. See also Waterman, H. I. Bertram, W. See Roth, W. A.

Bertrand, G., and Benzon, B., zine content of vegetable foods, A., 362, 1204\*

Bertrand, G., and Silberstein, L., determination of barium in soils, B., 407.

Bertrand, G., and Voronca-Spirt, (Mme.) C., titanium in phanerogamic plants, A., 855.

titanium in animals, A., 1098

titanium in cryptogams, A., 1113. Bertsch, J. A., Jaeger, A. O., and Selden Co., zeolite, (P.), B., 719. Bertsch, J. A. See also Jaeger, A. O.

Beryllium Corporation of America. See Price, R. C.

Besecke, W. See Terres, E.

Besse, J., purification of tannery effluents with argillaceous colloids, B., 962.

Best, C. H., disappearance of histamine from autolysing lung tissue, A., 957.

Best, C. H., Furusawa, K., and Ridout, J. H., respiratory quotient of the excess metabolism of exercise, A., 211

Best, R. J., acid reaction and carbon dioxide content of conductivity water, A., 1158.

rapid electrometric determination of chloride content of soils, B., 731.
Besta, A., heat-treating furnace, (P.), B., 80\*.

Bestuschev, M. See Sachanov, A. N.

Bethe, A., ionic permeability of the body surface of invertebrate sea animals as cause of the toxicity of sea-water of abnormal composition, A., 1195.

Bethe,  $H_{\cdot}$ , electron distribution in normal helium, A., 1116. term resolution in crystals, A., 1367.

Bethell, R. P. See Bradley & Foster, Ltd.

Bethenod, J., decomposition of liquid hydrocarbons, (P.), B.,

Bethlehem Foundry & Machine Co. See Needham, C. E.

Bethlehem Milling Co. See White, H. J Bethlehem Steel Co. See Bigge, H. C., Edwards, C. L. T.,

Kiehline, F. O., and Stevens, R. H. Betsis, G. See Horsch, S. M.

Betti, M., [preparation of] phenyl- $\beta$ -hydroxy- $\alpha$ -naphthylmethylamine, A., 1063.

Betti, M., and Bonino, G. B., chemical constitution and rotatory power, A., 122.

Betts, A. G., smelting of manganese [ore], (P.), B., 399.

Betts, C. L. See Lobley,  $A. \bar{G}.$ 

Beumée-Nieuwland, N., preserving [rubber] latex with borax,

Beumée-Nieuwland, N. See also De Vries, O., and Spoon, W. Beumer, H., splenic substance in Gaucher's disease, A., 344.

Beumer,  $H_{\cdot}$ , and Hepner,  $F_{\cdot}$ , cholesterol metabolism, A., 346. Benschlein, W. L., distilling apparatus for the chemical engineering laboratory, A., 418.

Beutel, E, and Kutzlnigg, A., action of potassium ferrocyanide on silver and several sparingly soluble silver compounds, A., 661. Beutler,  $H_{\cdot}$ , and Josephy,  $B_{\cdot}$ , energy increase in elementary processes, A., 238.

resonance as a result of collisions and its bearing on fluorescence and chemiluminescence, A., 481.

Beutler, H., and Rabinovitsch, Eugen, turning impulse and effective cross-section in chemical reactions, A., 1353.

Beutler, W. See Zielstorff, W. Beutner, R, and Hyden, E, binding power of scrum for alkaloids, and the inhibition of this effect by homologous alcohols; theory of narcosis, A., 348.

Beutner, R., and Kanda, T., the bioelectric model, A., 138.

Bevilacqua, L., elimination of poisonous constituents from white lead, (P.), B., 862.

Bewicke, P. W. See Appleyard, K. C.

Bewley, W. F., practical sterilisation by heat of small quantities

of soil, B., 951.

Bey, A., Gaafar, M., and Erfan, H., normal standard of the gastric functions in Egyptians, A., 1333.
Bey, L., and Faillebin, M., reaction of resorcinol and a new

coloured indicator, A., 1064.

Beyer, E. See Lüning, O. Beythien, K., pistachio oil, B., 861.

Beznák, A. von, determination of hippuric acid in urine, A., 464. oxidation of glutamic acid in the animal body, A., 466. synthesis of y-phenylglutamic acid, A., 557.

action of trypsin on conjugated bile-acids, A., 1198.

Bezssonoff, N., immediate physiological effects of avitaminosis-C, A., 104.

characterisation of the immediate physiological action of watersoluble vitamins, A., 104.

apparatus for the micro-determination of carbon by the method of Nicloux, A., 109.

vitamin colour reactions, A., 726.
Bezzenberger, F. K., and Aluminum Co. of America, electro-

deposition of metal [iron], (P.), B., 984.

Bezzenberger, F. K. See also International Nickel Co.

Bhagavantam, S., magnetic anisotropy of naphthalene crystals, A., 982.

magnetic behaviour of some organic crystals, A., 1133.

Bhagavantam, S. See also Raman, C. V.

Bhargava, K. K. See Landt, E. Bhatia, L. S., Ghosh, S., and Dhar, N. R., sensitisation of sols of mastic, gum dammar, and Odén sulphur in presence of gelatin

and some carbohydrates, A., 507.

Bhatnagar, S. S., Gupta, R. S., Mathur, K. G., and Mathur, K. N., action of X-rays on colloidal solutions, A., 1235.

Bhatnagar, S. S., and Luther, S. L., magnetic susceptibilities of

some inorganic and organic electronic isomerides, A., 871. Bhatnagar, S. S., Mathur, R. N., and Kapur, R. N., effects of magnetic field on certain chemical reactions, A., 1394

Bhatnagar, S. S., and Singh, B., naphthalene ring and Sugden's parachors. III., A., 867.

Bhattacharya, A. K., and Dhar, N. R., energetics, quantum action, and temperature coefficient of some photochemical reactions influenced by radiation of different frequency, A., 37.

kinetics, quantum efficiency, and temperature coefficients of the decomposition of ferric thiocyanate and the bleaching of neceyanine and some other photochemical reactions in

radiations of different frequencies, A., 516.
influence of the variation of intensity [of light] on the velocity of the decomposition of ferric thiocyanate and the bleaching of neocyanine and some other photochemical reactions, A.,

chemical reactions in infra-red radiations (7304 A.), A., 1022. influence of [light] intensity on the velocity of photochemical reaction, A., 1404.

relation between the intensity [of incident radiation] and the velocity of the reaction between potassium oxalate and bromine in visible and infra-red radiations, A., 1405.

Bhattacharya, A. K. Soc also Mukerji, B. K.

Bhattacharya, M. Sce Peacock, D. H.

Bhattacharyya, A. S. Sco Mukherjee, J. N.

Bhattacharyya, D. K., analysis of first spark spectrum of sulphur,

second spark spectrum of selenium (So++), A., 966.

Bhattacharyya,  $\hat{R}$ . C. See Neogi, P.

Bhattacharyya, T., Bose, P. K., and Ray, J. N., quinazolines. I., A., 939.

Bialy, B., machine for disintegrating, grinding, or threshing, (P.), B., 580.

Bianchi, A., petrography of the Alpi Aurine and Vedrette Giganti regions, A., 1418.
Bianchi, A. E., and Guardabassi, G., apparatus for the distillation

and other hot treatment of liquids, (P.), B., 627.

Biazzo, R., volumetric determination of reducing sugars, A., 85. Bibb, C. H., and Lucas, H. J., air oxidation of hydrocarbons catalysed by nitrogen oxides, B., 667.

Biber, W. A. See Bogatski, W. D.

Bichowsky, F. R., and Wilson, C. W., gaseous effusion at high

temperatures, A., 756. Bichowsky, F. R. See also Delco-Light Co.

Bickel, A., metabolic activity of arsenic, A., 1486. utilisation of skim milk, B., 955.

Bickel, A., and Marschalkowitz, D., effect of intragastric administration of calcium on the urinary C: N quotient in rabbits, A., 1101.

Bickel, A., and Nigmann, G., behaviour of the blood-sugar values after oral administration of yeast, A., 351.

behaviour of liver-glycogen after oral administration of yeast, A., 1201

Bickerman, M. J., surface tension of insulating liquids under the influence of an electric field, A., 381.

Bickford & Sons, Ltd., A. M., Hendry, J., and Berry, P. A., production of basic copper carbonate from impure solutions of copper salts, (P.), B., 244.
Bicking, G. W. See Shaw, M. B.

Bidaud, F. See Soc. des Usines Chim. Rhône-Poulenc.

Biddle, A., and United Products Corporation of America, composition of gum chicle, rubber, and an aqueous colloid, (P.), B.,

treatment of rubber and similar substances, (P.), B., 692. antiseptic, antifouling, germicidal, waterproof coatings, (P.), B., 540.

Bidwell, C. C., and Lewis, E. J., thermal conductivity of lead and of single- and poly-crystal zinc, A., 385.

Biefang, H. J., treatment of steel, (P.), B., 329.
Bielenberg, W., application of the Abbé number to the refractometric determination of the constitution of organic liquids, A., 1419.

Bielopolski, M. See Ipatiev, V. N.

Bierbaum, C. II., and Lnmen Bearing Co., bearing alloy, (P.), B., 60. Bierbrauer, E. See Luyken, W.

Bierce, H. E., decolorisation of vegetable oils, (P.), B., 727.
Bierich, R., and Rosenbohm, A., cytochrome. I. Reduction time of normal tissue and yeast. II. Reduction time of benignant and malignant tumour tissue, A., 1340.

Bierman, G. H. See Kinney, Le B. W.

Bierry, H., specificity and changes of the proteins of blood-plasma, A., 587.

Bierry, H., and Gouzon, B., micro-determination of glycogen in the liver, A., 341.
Bigelow, F. B., furnace walls, (P.), B., 461.

Bigelow, L. A., (preparation of ] o-bromotoluene, A., 1051.
Bigelow, L. A. See also Reynolds, H. H.
Bigge, H. C., Ellicott, C. R., and Bethlehem Steel Co., low-carbon chromium steel, (P.), B., 686.

Bigiavi, D., reactions of diazo-hydrates, A., 1290.

Bigiavi, D., and Stefanic, S., action of diazo-hydrates on azoxyphenols, A., 693.

Bigiavi, D. See also Angeli, A. Bigum, H. J. J. See Gerstenberg, A.

Bigwood, E.J., [ $p_{\rm H}$  of blood], A., 338. Bigwood, E.J., and Wuillot, A., "protein-sugar" of the blood, A., 714.

Biilmann, E., and Braak, T. ter, dimethyldipropylalloxantin and its reduction potential, A., 1316.

Bijlsma, U. G., Burn, J. H., and Gaddum, J. H., oxytocic, pressor, and antidiuretic activities of commercial samples of pituitary extract, A., 725.

Bijvoet, J. M., and Frederikse, W. A., scattering power of X-rays and the electron distribution of the H-ion, A., 1208.

Bilgram, H., importance of hop-tannin for wort and beer, B., 618. Bilham, E. G., self-adjusting pipette, A., 534.

Bilibin, G., alumohydrocalcite, A., 45.

isomorphous mixtures in the calcite group, A., 381.

Billinger, R. D. See Cantelo, R. C. Billinghame, W. E., emulsification of tar, bitumen, crossote, petroleum, heavy oils, etc., (P.), B. 199\*.

Billings, J.G. See Bilsky, J

Billings, M., chemistry, optics, and genesis of the hastingsite group of amphiboles, A., 788.

Billner, K. P., and Broander, N. E., manufacture of cellular concrete, (P.), B., 1017.

Billon, F., manufacture of alimentary fish powders, (P.), B., 110. Billon-Bardon, (Mme.) P., reduction of ethyl diphenylglycidate with sodium and alcohol, A., 926.

Bills, C. E., and Honeywell, E. M., antirachitic substances. VIII. Purified ergosterol and its esters, A., 104.

Bills, C. E., Honeywell, E. M., and Cox, W. M., jun., antirachitic substances. IX. Activation of ergosterol, A., 222.

Bills, E. J. See Duff, J. C. Bilsky, J., gas absorber for products of combustion, (P.), B., 632. purifying the exhaust gases from internal-combustion engines, (P.), B., 632.

Biltz, K. See Krais, P.

Biltz, M. See Hevesy, G. von.

Biltz, W., Fischer, Werner, and Juza, R., systematic doctrine of

affinity. L. Pneumatolytic transference of gold by chlorine, A., 31.

Biltz, W., and Meyer, Fritz, systematic doctrine of affinity. XLVII. Relationship of mercury to certain metals, A., 31.

Biltz, W. See also Fendius, C., and Fischer, W.

Binder, O. See Skraup, S.

Binder, P., reserves under sulphur colours [in printing], B., 169. Bindphast Products, Ltd., and Wood, E., artificial marble, stone, etc., (P.), B., 434. Binet, L., and Fabre, R., distribution in the organism of oil

injected in the arterial system, A., 347.

Bing, F. C. See Shohl, A. T. Binger, C. A. L., Christie, R. V., Davis, J. S., jun., and Hiller, A., blood-chlorides in conditions associated with pneumonia, A., 1101.

Bingham, C. H., jun., compressed-gas cylinders, etc., (P.), B., 344

Bingham, E. C., colloid types, A., 505.

Bingham, E. C., and Robertson, J. W., method for simultaneous measurement of plasticity and elasticity, B., 153.

Bingham, E. C., and Thompson, T. R., fluidity of mercury, A.,

Bingold, K., oxidation processes with the iron-containing component of hæmoglobin, A., 220.

Bini, G., characteristics of the Red Sea with regard to the nitrogen cycle, A., 1417.
Binnie, A. M., influence of oxygen on corrosion fatigue [of steel],

B., 778.

Binnie, D. See Andrew, J. H.

Binns, F. W. See Virginia Smelting Co.

Binz, A., and Räth, C., biochemical properties of pyridine and quinolinc derivatives, A., 349. manufacture of arseno-compounds of the pyridine series, (P.),

B., 959\*

Binz, A., Räth, C., and Gante, J., pyridine and quinoline derivatives. IV. Pyridine-3-arsinic acid., A., 83.

Binz, A., Räth, C., and Urbschat, E., pyridine and quinoline derivatives. V. Derivatives of 2-hydroxypyridine-5-arsinic acid., A., 1471.

Bion,  $\hat{F}$ ., X-ray studies of dyed cellulose; theory of dyeing, B.,

Birch, S. F., and Norris, W. S., action of sulphuric acid on mercaptans, B., 1004.

Birch, S. F., and Stansfield, R., knock ratings of pure hydrocarbons, B., 345.

anti-knock ratings of pure hydrocarbons, B., 422.

Birckenbach, L., and Huttner, K., pseudohalogens. III. The pseudohalogen tricyanomethyl and the mixed halogen tricyanomethyl bromide, A., 302. pseudohalogens. IV. Hydrolysis constants of bromotricyano-

methane and of chloro-, bromo-, and iodo-trinitromethanes,

Birckenbach, L., and Linhard, M., pseudohalogens. V. Mixed halogen, bromo-oxycyanogen, A., 1285.

Bird, E. H., and Koppers Co., removal of naphthalene constituents from gases, (P.), B., 916.

Bird, O. D. See Coghill, R. D., and Winter, O. B.
Bird & Co., (Godfrey, (Sir) G. C., Benthall, E. C., Tarlton, E. S.,
Wheeler, H. F., Scott, G. L., and Spencer, E.), extraction of cellulose or paper pulp from fibrous vegetable matter, (P.), B., 13.

separating or extracting cellulose or paper pulp from raw

materials, (P.), B., 50

Birdseye, C., packaging and quick-freezing perishable flesh products. II. Packaging flesh products for quick freezing, B., 621.

packaging and quick-freezing perishable flesh products. I. More rapid freezing means better preservation, B., 697. packaging and quick-freezing perishable flesh products. III.

Sanitary measures in fish-dressing plant, B., 995.

Birdseye, C. See also Gen. Foods Co. Birge, R. T., heat of dissociation of nitrogen, A., 7.

electronic charge e, A., 368. isotope of carbon, mass 13, A., 970.

isotopes of oxygen, A., 971.
Birge, R. T., and Hopfield, J. J., ultra-violet band spectrum of nitrogen, A., 964.

Birge, R. T., and Wulf, O. R., molecular linking and other properties of the hydrogen halides, A., 1368. Birge, R. T. See also Hyman, H. H., and King, A. S.

Birkenberg, O., change in emission of ion-rays with time, A., 229. Birkenstock, W., transport numbers of lithium chloride and bromido, and sodium iodide dissolved in acetone and alcohol,

Birkheimer, E. R. See Marvel, C. S.

Birkholz, H. E., and National Air Filter Co., air filter, (P.), B., 192.

Birmingham Electric Furnaces, Ltd., and Lobley, A. G., [preventing heat loss from] annealing and other furnaces, muffles, etc., (P.), B., 39.

[door suspension and control system for] annealing and other

furnaces, muffles, etc., (P.), B., 193. electric resistance furnace, (P.), B., 400. [rotary] electric furnaces, (P.), B., 726.

Birnbach, R. M., sewage disposal system, (P.), B., 494. Birnbräuer, E. See Siemens Gebr. & Co.

Birner, M., determination of chlorine in organs and foods, A.,

Birosel, D. M. See Raiford, L. C.

Birr, E. J. See Walden, P.
Birse, D. J., dolomitisation of palæozoic limestones in Manitoba,
A., 419.

Birstein, V. Sec Zocher, H.

Birtley Iron Co., Ltd. See Appleyard, K. O. Birtwell, C., Clibbens, D. A., and Geake, A., chemical analysis of cotton; action of sodium hydroxide solutions on modified cotton cellulose at the ordinary temperature, B., 89. Birtwell, C., and Ridge, B. P., chemical analysis of cotton;

determination of cellulose by oxidation with chromic acid, B., 89.

Bischof, W. See Maurer, Ed.

Bischoff, C. See Trénel, M.
Bischoff, F., substituted guanidines, A., 196.

Bischoff, F., and Sahyun, M., denaturation of insulin protein by concentrated sulphuric acid, A., 358.

Bischoff, F., Sahyun, M., and Long, M. L., guanidine structure and hypoglycamia, A., 468. Bischoff, F. See also Maxwell, L. C. Bischoff, H., blood-catalase, A., 339.

Bish, E. J. B., determination of small quantities of starch in vegetable tissue, A., 476.

Bishop, L. R., composition and determination of barley proteins. II., B., 696.

changes undergone by the nitrogenous constituents of barley during malting. I., B., 696.

Bishop, W. B. S., occurrence of lead in hen's eggs, A., 340. Biskind, M. S. See Barlow, O. W.

Bismarckhütte. See Jaworski. P.

Bissell, R. E., and Thompson Products, Inc., heating furnace, (P.), B., 213.

Bissell, W. See Kempton, C. H. Biswas, H. See Mitter, P. C.

Biswas, S. C., ionisation potentials and grating energies of atoms in the solid state, A., 113.

Bitter, F., magnetic susceptibilities of several organic gases, A.,

diamagnetism and wave mechanics, A., 1129.

magnetic susceptibility of nitric oxide at 296° and 216° Abs., Ă., 1224.

Bittner, K. See I. G. Farbenind. A.-G.

Bjerre, S., grinding mill, (P.), B., 300.
Bjerregaard, A. P., and Doherty Research Co., utilisation of petroleum hydrocarbons, (P.), B., 804.

Bjerrum, N., distribution coefficients of ions, A., 132.

recent views on electrolytes, A., 764.

Björkeson, A., methods for obtaining X-ray spectra of gases,

Björnstad, J. See Pulsometer Engineering Co., Ltd.

Bjurström, T., and Arnfelt, H., X-ray analysis of the iron-boron system, A., 1138.

Blachly, F. E. See Jones, L. D.

Black, C. K. See Goshorn, J. H.

Black, C. O. See Du Pont de Nemours & Co., E. I.

Black, J. C., fractionation of hydrocarbons, (P.), B., 234. cracking oil in liquid phase, (P.), B., 770. cracking of oil, (P.), B., 881.

vacuum distillation of hydrocarbons, (P.), B., 884.

Black, J. C., Chappell, M. L., and Pan American Petroleum Co., process of purifying hydrocarbons, (P.), B., 744.

Black, J. C., and Contact Filtration Co., apparatus for treating clay, (P.), B., 1016.

Black, J. C., and Gasoline Products Co., Inc., treatment [cracking]

of hydrocarbons, (P.), B., 744.

Black, J. C., Low, W. H., and Pan American Petroleum Co., purification of hydrocarbons, (P.), B., 744.

Black, J. C., and Pan American Petroleum Co., treatment of

petroleum oils, (P.), B., 386.

Black, J. C., Rial, W. D., Howes, R. T., and Pan American

Petroleum Co., purifying petroleum oils, (P.), B., 744.

Black, J. C., Rial, W. D., McConnell, J. R., and Pan American
Petroleum Co., imparting fluorescence to [lubricating] oil; fluorescent product, (P.), B., 509.

removal of acid reaction products from [pctroloum] oil [distillates], (P.), B., 885.

Black, J. G. See Duffendack, O. S.

Black, N. H., projection of Brownian movement, A., 44.

Blackie, A., and Williams, B. H., gravitometer for recording

rapid changes of density in gases, A., 672.

Blackwell, E. G., retort structures, (P.), B., 194.

Blagden, J. W., and Howards & Sons, Ltd., manufacture of hydrogenated [cinchona] alkaloids, (P.), B., 738\*.

Blagden, J. W. See also Howards & Sons, Ltd.

Blair, E. W. See Reilly, J., and Smith, F. E.

Blair, G. W. S., volocity function of viscosity of disperse systems, A 262, 1005

A., 262, 1005.

Blair, G. W. S., and Crowther, E. M., flow of clay pastes through narrow tubes, B., 407.

Blair, M. L., and A.C. Spark Plug Co., air cleaner, (P.), B., 581.

Blaise, H. H., effect of fuel and air mixture in burning cement clinker, B., 434. Blake, F. C., and Lazote, Inc., manufacture of hydrogen, (P.),

B., 95, 897.

Blake, F. C., Lord, J. O., Phebus, W. C., and Focko, A. E., X-ray analysis of chromium-nickel alloys, A., 1366.

Blake, F. C. See also King, H. P.

Blake, G. T., adsorption of stearic acid by carbon, B., 828.

Blakeborough, J. B. See Blakeborough, R. A. Blakeborough, R. A., Blakeborough, J. B., and Lindsay, J., apparatus for straining liquids, (P.), B., 459, 1036.
Blalock, P., and Thompson, T. G., waters of Argyle lagoon. I.,

B., 304.

Blanc, G. A., removal of ferric chloride during treatment of leucite and similar silicates with hydrochloric acid, (P.), B., 851. production of chemically active anhydrous aluminium oxide, and its uses, (P.), B., 1014.

Blanc, J. See Seyewetz, A.

Blancato, M., and Kent-Blancato Co., Inc., coating composition, (P.), B., 483.

Blanchard, E, and Chaussin, J, influence of a complete [inorganic] fertiliser on the osmotic pressure in cultivated plants; special action of potassium fertilisers, A., 854.

Blanchard, K. C., carbamide series; nitrocarbamide, nitrobiuret, and dicyanic acid, A., 1169.

Blanchard, K. C. See also Davis, T. L.

Blanchard, L., symmetrical ethers of the alcohols, CH<sub>2</sub>X·CH(OH)·CH<sub>2</sub>X' and CH<sub>2</sub>X·CH(OH)·CH<sub>2</sub>·OR, A., 171. derivatives of cyclobutanol, A., 444. Blanchard, R. See Boswell, P. F.

Blanchet, L., manufacture of alkyl halides, glycols, and alcohols from cracked gases of hydrocarbon oils, (P.), B., 10.

Blanchetière, A., hydrolysis of ovalbumin by trypsin in relation to the formation of diketopiperazines, A., 203.

Blanck, E., field experiments with Zeotokol, B., 184.

Blanck, E., Giesecke, F., and Keese, H., chemical weathering in northern Norway, A., 169.

Blanck, E., and Keese, H., so-called kaolinisation of granite under a humus cover in the Black Forest, A., 169. influence of clay on plant growth, B., 185.

composition of some Montenegrin soils, B., 653.

Blanck, E., and Rieser, A., weathering [of the building stone] of the Bremen Town Hall, B., 173.

Blanckenhorn, F. See Gerlach, H. Blanco, J. G. See Raymond, A. L. Blanco, S., new dihydroterpenc, A., 819.

Blaney, H. F. See Taylor, C. A.

Blank, A. J., unsoundness factor in Portland cement manufacture, B., 777.

Blanke, F., saturation of sugar juices in the manufacture of beetroot and cane sugars, (P.), B., 489.

Blankenhorn, M. A., blood-urobilin; determination in normal human blood, A., 206.

Blanksma, J. J., absorption of formaldehyde by starch, A., 544. absorption of formaldehyde by cellulose, A., 544.

Blas, L., and Magallón, M., concentration of protein in serum and the reactions of coagulation, A., 1095. Blas, L. See also Bermejo, L.

Błaszkowska, Z., bottle for accurate weighing of volatile liquid mixtures, A., 1162.

Blaszkowska, Z. See also Swientoslawski, W. Blatherwick, N. R., and Sahyun, M., influence of adrenaline and insulin on distribution of glycogen, A., 357.

Blatt, A. H. See Conant, J. B.

Blau, H., separation of mixtures of gases and gases with vapours, (P.), B., 500.

Blau, M., experiences with the Lurgi sinter apparatus, B., 397. Blazey, C., idiomorphic crystals of cuprous oxide in copper, A., 1144.

determination of cadmium in cadmium-copper wire, B., 132. brittleness in arsenical copper. II., B., 286.

Bleachers' Association, Ltd., Kershaw, W., Barrett, F. L., and Gaunt, R., production of pattern effects on textile materials composed of or containing cellulose esters, (P.), B., 127.

treatment of fabrics containing acetyl silk, (P.), B., 204, 640.

Bleakney, W., new method of positive-ray analysis and its application to the measurement of ionisation potentials in mercury

vapour, A., 970.

Bleeck, W. A. F., primary battery, (P.), B., 253\*.

Bleecker, W. F., preparation of luminous surfaces, (P.), B., 826.

Bleger, J. See Sabetay, S. Bleier, P. See Müller, Adolf.

Blenio, G., fire-extinguishing compound, (P.), B., 461. Bleyberg, W., shortening the viscosity determination on the Engler and Holde viscosimeters, B., 86.

Bleyberg, W. See also Holde, D. Bleyer, B., and Diemair, W., detection of fruit wine in grape wine, B., 834.

Bleyer, B. See also Brann, W. Blicke, F. F., and Smith, F. D., action of aromatic Grignard reagents on arsenious oxide, A., 833.

phenolhalogenophthaleins, A., 926. identification of o-, m-, and p-hydroxybenzoic acids, A., 926. tetra-aryldiarsines. I., A., 1090.

Blinks, L. R., high- and low-frequency measurements with Laminaria, A., 360.

Blinks, L. R. See also Cooper, W. C., jun.

Blinoff, G. See Kautsky, H.
Blish, M. J., Sandstedt, R. M., and Platenius, H., correlation between diastatic power of flour and crust colour in the test loaf, and its significance, B., 760.

Bliss, L. R., chlorine as sugar decolorant, B., 832.

Bliss, S., amide-nitrogen of blood. II. Determination. III. Muscular exercise; rôle of ammonia in neutralisation of lactic acid, A., 339. amide-nitrogen of blood. IV., A., 461.

Bliss Co., E. W., and Kruse, P., processing sheets to be used in can making, (P.), B., 288.

Bliss Co., E. W. See also Towne, W. M.

Blix, R., X-ray analysis of the system chromium-nitrogen; con-

stitution of ferrochromium containing nitrogen, A., 747.

Bloch, E. See Bloch, L. Bloch, F., quantum med , quantum mechanics of electrons in a crystal lattice, A., 247.

electron theory of ferromagnetism and electrical conductivity, A., 1360.

Bloch, L., and Bloch, E., intercombinations and new terms in the spark spectrum of sulphur (S 11), A., 225. spark spectra of iodine, A., 617.

spark spectra of sulphur, A., 1117.

Bloch, O., interaction of silver halides in emulsion form, B., 871. Blocher, J. M., purification of water by ultra-violet radiation, B., 1034.

Blochwitz, A., colour variation in the moulds, A., 108.

Block, F., susceptibility and change in resistivity of metals in a magnetic field, A., 632.

Blodgett, (Miss) K. B., exponential yield of positive ions in argon, A., 618.

Blom, A. V., ageing processes of paints, B., 180.

microstructure of paint films and proof of internal stresses, B.,

mechanism of the wrinkling of wood oil, B., 783.

Blom, I. J., sulphur content of Transvaal oil shales, B., 767. Blom, J., and Treschow, C., determination of small quantities of nitrates in soils and plants, B., 370.

Blomfield, A. L., Harner, L. S., Coe, H. S., and Cycle Co., separation of solids from liquids, (P.), B., 498.

Bloom, E. B. Sec Chamberlin, D. S.

Bloomenthal, S., detection of the isotopes of lead by the band spectrum method, A., 1124.

Bloomfield, G. See Commercial Solvents Corp., and Woodruff, J. C.

Bloomfield, J. J., and Blum, W., health hazards in chromium

plating, B., 228.
Bloomfield, J. J., and Isbell, H. S., the problem of automobile

exhaust gas in streets and repair shops of large cities, B., 341.

Bloor, W. R., distribution of unsaturated fatty acids in tissues.

III. Vital organs of the ox, A., 208.

oxidative determination of phospholipin in blood and tissues, A., 837.

Blotner, H., and Murphy, W. P., effect of liver on the blood-sugar, A., 1331.

Blount, B. K., Perkin, W. H., jun., and Plant, S. G. P., stereoisomerism in polycyclic systems. VI., A., 1312.

Blow, C. M., viscosity of rubber latex, B., 729. Blow, C. M., and Stamberger, P., influence of amount of surplus liquid on the swelling maximum of rubber jellies, A., 1008. Blow, C. M. See also Stamberger, P. Bloxam, H. C. L. See Dunn, J. T.

Blue Diamond Co. Seo Barton, W. H.

Blüchel, W. See Elöd, E. Blüh, O., and Jost, W., electrolytic conduction of crystal surfaces and the free ion conduction of solid salts, A., 32.

Blum, F., is there an iodine value of the blood dependent on the thyroid gland? A., 339.

Blum, J., determination of the elementary oxidisable carbon in solid fossil fuels, B., 502.

Blum, J. K., apparatus for grinding and crushing material, (P.),

B., 268. Blum, O., two supposed instances of isomerism in the aromatic series, A., 689.

Blum, W., colloids in the electroplating of metals, B., 478. Blum, W., and Bekkedahl, N., measurement of  $p_{\rm H}$  in nickelplating solutions, B., 923.
Blum, W. See also Bloomfield, J. J.

Blumann, A., Hellriegel, W., and Schulz, L., auto-oxidation of cedrene, A., 1076.

Blumenberg, H., jun., mining of boron compounds, (P.), B., 207. refining of mineral oil, (P.), B., 386, 634.

production of aluminium chloride, (P.), B., 643. filtering material, (P.), B., 664, 896.

treatment [cracking] of mineral oils, (P.), B., 881.

Blumenberg, H., jun., and Stockholders Syndicate, production of non-hygroscopic phosphates [fertiliser], (P.), B., 411.

Blumenfeld, J., preparation of titanium and similar compounds [oxides and hydroxides], (P.), B., 207.

Blumenfeld, J., and Commercial Pigments Corporation, manufacture of titanium oxide, (P.), B., 897\*.

preparation of titanium hydroxide, (P.), B., 897\*.

Blumenstock-Halward, E. See Pollak, J.

Blumenthal, H., separation of lead and bismuth, A., 1258.
Blumenthal, S., removal of bleaching chemicals from fruit or the like, (P.), B., 698.

Blumentritt, M., Wien's voltage effect in electrolytes, A., 512.

Blumer Chemische Fabrik, L. See Scheiber, J

Blumfeldt, A. E., constitution of bakelite-C, B., 728. Blumrich, K. See I. G. Farbenind. A.-G.

Blunt, K., and Sumner, E., calcium of cheese, B., 374.

Boardman, C. C., and Thermatomic Carbon Co., gas filter, (P.),

Boas, W., and Schmid, E., stretching of cadmium crystals, A., 634. variation with temperature of the critical stress of cadmium crystals, A., 1370.

Bobko, E. V., Goluber, B. A., and Tynlin, A. F., causes of plant

suffering from over-liming, B., 407. Bobko, E. V., and Maslova, A. L., phosphate nutrition of plants and soil acidity; rock phosphate fertilisation on chernozem soils, B., 409.

Bobkova, M. See Kulikov, V. Bobtelsky, M., theory of chemical reactions in concentrated

solution of electrolytes, A., 1245.

Bobtelsky, M., and Kaplan, D., influence of concentrated electrolytes on the course of chemical processes; potassium permanganate, A., 148.

catalytic effects in concentrated salt mixtures, A., 151 Bobtelsky, M., and Kaplan, D. [with Diesenhans,  $(F_{\tau l})$ ], reaction velocity of iodine with sodium formate in presence of concentrated electrolytes, A., 1149.

Bobtelsky, M., and Rosenberg, A., velocity of oxidation of hydrogen bromide by chromic acid in presence of salts. I., A., 151. velocity of oxidation of hydrogen bromide by chromium trioxide

in presence of chlorides, and the catalytic influence of the manganous ion. II., A., 1149.

Bock, A. V. See Dill, D. B., and Hurxthal, L. M.

Bock, J. C., blood-sugar, A., 1190.

Bockmühl, M., Schwabe, R., Ehrhart, G., and Winthrop Chemical Co., manufacture of soporifics containing at least one alkinyl group, (P.), B., 454\*.

Bockmühl, M., Schwarz, Adolf, and Winthrop Chemical Co.,

manufacture of therapeutically-active aromatic compound containing mercury in a lateral chain, (P.), B., 73\*

Bodansky, M., effect of  $p_{\rm H}$  on saponin hæmolysis, A., 952. Bode, H., maceration method in microscopical examination of

coal, B., 230.

Bodea, C. See Ionescu, M. V.

Bodendorf, K., detection of adulterants in cacao butter by oxidation with perbenzoic acid, B., 528.

Bodendorf, K. See also Meerwein, H. Bodenstein, C. A. See Borsche, W. Bodenstein, C. K. See Borsche, W.

Bodenstein, M., monochloroamine and hydrazine. I. Decomposition of monochloroamine in acid solution, A., 34. chain reactions, A., 278.

monochloroamine and hydrazine. II., A., 282.

chemical action of light, A., 1248.

decomposition of ozone catalysed by chlorine, A., 1397. rôle of walls of vessels in gas reactions, A., 1399.

kinetics of the contact sulphuric acid process, and modern views on adsorption, B., 354.

Bodenstein, M., Hahn, O., Hönigschmid, O., and Meyer, R. J., ninth report of the German Commission on atomic weights, A., 232.

Bodenstein, M., Jost, W., and Jung, G., influence of the intensity of illumination on the velocity of photochemical union of bromine and hydrogen, A., 892.

Bodenstein, M., Lenher, S., and Wagner, C., photochemical formation of carbonyl chloride. IV. Change at low pressures and an improved interpretation of the mechanism of the reaction, A., 894.

Bodenstein, M., Padelt, E., and Schumacher, H. J., thermal reaction between chlorine and ozone, A., 1394.

Bodenstein, M., and Schumacher, H. J., mechanism of formation of chlorine hexoxide, A., 1403.

Bodenstein, M., and Wagner, C., designation of quantity of light in photochemistry, A., 892.

Bodin, V., and Gaillard, P., drying of clays and of clay bodies, B., 919.

Bodinus, cacao oil, B., 608.

Bodman, G. B., hydrogen peroxide-hydrochloric acid treatment of soils as a method of dispersion in mechanical analysis, B., 141. Bodmer, A., and Heberlein & Co. Akt.-Ges., [patterned woven]

fabric making, (P.), B., 14\*. dyeing, (P.), B., 93\*.

treating cotton fibres to produce wool-like effects, (P.), B., 640\*

Bodnár, J., enzymic condensation of formaldehyde to sugar. II., A., 99.

determination of minute quantities of mercury, A., 1032.

Bodnár, J., and Bernauer,  $\hat{C}.$ , transformation of acetaldehyde in higher plants, A., 1112.

Bodnár, J., and Nagy, V. L., microanalytical tobacco determinations. II. Determinations of nicotine in fresh green tobacco. A., 729.

Bodnár, J., and Szép, E., micro-determination of mercury, A., 614. Bodnár, J., and Tankó, B., mechanism of the action of musclephosphatese, -cozymase, and insulin, A., 1106.

Bodroux, M. D., action of cyclohexene and its derivatives on organic compounds in the presence of aluminium chloride, A.,

Bock, F., and Beaucourt, K., sources of error in organic microelementary analysis. II. Determination of carbon and hydrogen, A., 204.

Bock, F., and Lock, G., determination of quinol and pyrocatechol in presence of resorcinol and other phenols. I., A., 1474

Boeckner, C., method of obtaining the optical constants of metallically reflecting substances in the infra-red, A., 975.

Boeckner, C. See also Mohler, F. L. Boedecker, F., production of 1-propenyl-3-ethoxy-4-hydroxybenzene [alkyl ethers of protocatechuic aldehyde], (P.), B., 377\*

preparation of monoalkyl ethers of protocatechuic aldehyde in addition to vanillin, B., 622.

Boedecker, F., and Ludwig, H., "noctal" and "pernocton." III. Behaviour in the organism. IV. Determination of the activity of similar barbituric acids. V. Influence of the structure of the alkyl group on the activity, A., 469. Boedeker, H. See Anschütz, L.

Boedtker, E., cymenc, a by-product in the manufacture of cellulose by the bisulphite process, B., 592.

Boedtker, E., [with Wiger, B., and Kerlov, R.] homologues of diphenyl, A., 1288.

Boedtker, E., and Kerlov, R., dicymyl, A., 1071. Böe, J. See Lunde, G.

Böeseken, J., theory of molecular dislocation applied to homogeneous catalysis, A., 35.

determination of the configuration of polyalcohols by means of boric acid, A., 291.

formation of cyclic acetals by the action of acetone and acetaldehyde on ay-dihydroxy-compounds, A., 1166.

composition of a eleostearic acid, the most important component of Chinese wood (tung) oil, B., 607.

Böeseken, J., and Adler, A. A., action of acetylene on benzene in presence of aluminium chloride, A., 687.

Böeseken, J., and Cohen, W. D., sesamin, A., 298. Böeseken, J., and Elsen, G., oxidation of unsaturated substances with perbenzoic and peracetic acids. II., A., 547.

Böeseken, J., and Felix, B. B. C., configuration of pentaerythritol. III., A., 791.

Böeseken, J., and Max, N., condensation of ethylene with sulphuric acid in presence of mercurous and copper sulphates, A., 674. Böeseken, J., and Meyer, O., preparation of collodion membranes,

Böeseken, J., Smit, W. C., and Gaster [with Slooff, M.], action

of per-acids on certain unsaturated organic substances and of benzoyl peroxide on a mixture of paraffins, A., 910.

Böeseken, J. Sec also Gelber, E. T., and Küchlin, A. T. Boegehold, A. L., and General Motors Research Corporation, malleable iron alloy, (P.), B., 523.

Boeger, O. See Polikier, H.

Bøggild, O. B., meteoric iron of Savik, C. York, N. Greenland, A., 45.

Böhi, J., zinc oxide and chlorophyll as optical sensitisers, A., 278. Böhler Gebrüder & Co. Akt.-Ges., Wien, freatment of freshly-cast steel ingots, (P.), B., 523.

Boehm, A. B. See Becker, A. E.

Böhm, E., carroting animal hair and wool, (P.), B., 470\*. Böhm, F. See Scheffer, J.

Boehm, G., barium sulphate as an indicator of the degree of hydration of sulphuric acid in drying apparatus, A., 786. analogous action of sodium fluoborate and sodium perchlorate

on skeletal muscle, A., 1104.

Böhm, J., X-ray study of microcrystalline ferric hydroxide minerals, A., 988.

determination of morphine in opium, opium extract, and tinctures, B., 796.

Böhm, J., and Ganter, F., influence of crystal habit on the Debye-Scherrer diagram, A., 1220.

Boehm, T., reactions between furfuraldehyde, aniline, and malonic acid, A., 573.

Böhm, V., treating the surfaces of hat bodies, (P.), B., 640. Böhm, W. See Raudnitz, H.

Böhme Akt.-Ges., H. T., increasing wetting and penetrating capacity of liquids for treatment of textiles and leather, (P.), B., 353.

finishing of fabrics and fibrous materials, (P.), B., 640. Böhner, G. See Grasselli Dyestuff Corporation.

Boehringer, A., extraction of theobromine, (P.), B., 149.

preparation of tetrazoles, (P.), B., 350, 589, 808.

improving the keeping quality of margarine, butter, etc., (P.), B., 450.

manufacture of maleic acid and maleic anhydride, (P.), B., 636.

Boehringer, A. (Boehringer Sohn, C. H.), manufacture of maleie acid and anhydride, (P.), B., 672.

manufacture of dihydromorphine, (P.), B., 699. Boehringer Sohn, C. H. See Boehringer, A.

Boekenoogen, H. A. Sco Kolkmeijer, N. H.

Bömer, A., and Engel, H., glycerides of fats and oils, XIII. Glycerides of chaulmoogra oil, B., 564.

Böning, P., dielectric breakdown in solids, A., 1134. Boente, L. Sco Skita, A. Boerlage, (Miss) L. M. Sco Aten, A. H. W.

Börnstein, E., and Seckopf, K., dependence of the yield of byproducts on the water content of the coal and the carbonising temperature, B., 914.

Boertlein, J. C. See Grasselli Chem. Co. Bösenberg, H., testing of bitumen, B., 967.

Bösl, O., action of thyroxine on the glycogen content of skeletal muscle and of the liver of guinea-pigs, A., 221.

Böttger, O. See Scholl, R. Böttger, W. detection of sodium with potassium antimonate, A., 1257.

determination of phosphorus in "phosphor solutus" according to D.A.B. VI., B., 939.

Bogardus, A. G. See Huff, L. C. Bogarjevski, P. I., Grozni oil gases, B., 503.

Bogart, G. B., and Texas Co., treating [cracking] hydrocarbon

oils, (P.), B., 669.
Bogatski, W. D., and Biber, W. A., determination of turpentine vapour in the air, B., 255.

Bogayevski, A. I., and Goldstein, B., effect of X-rays on the process of enzyme formation in the isolated pancreas, A., 470.

Bogdandy, S. von. See Polanyi, M.
Bogdanov, S. V. See Vorosheov, N. N.
Bogert, M. T., and Connitt, G. H., 6-amino-m-cresol and derivatives, A., 553.

Bogert, M. T., and Coyne, B. B., syringic acid and derivatives, A., 444. Bogert, M. T., and Elder, F. R., 6-hydroxypiperonylic acid and

allied compounds, A., 445. Bogert, M. T., and Hess, F. G., thiazoles. XV. Benzthiazole

arsenicals of arsphonamiue (salvarsan) type, A., 1321.

Boggiani-Pico, L., treatment of organic refuse, (P.), B., 456. Boggs, C. R. See Spear, E. B. Bogin, C., and Commercial Solvents Corporation, purification of

butaldehyde, (P.), B., 89\*. Bogitch, R., reduction of fused silicates by carbon monoxide: copper silicates, A., 400.

oxidation and reduction of silicates of iron by gases, A., 1409. electrolysis of nickel, B., 213.

Bogoiavlenski, F. I., mercerisation of cellulose, B. ,976.

Bogoiavlenski, L. N., rate of decay of polonium at different points in the U.S.S.R., A., 737.

value of the period of polonium at various places, A., 1358. Bogros, A., and Rocard, Y., fino structure of diffused rays at

critical opalescence, with reference to the Cabannes-Daure effect, A., 740.

Bogue, R. H. See Lerch, W.

Bohart, G. S., and National Canners Association, preventing the discoloration of canned foods, (P.), B., 416.

Bohle, J., extraction of orujo [olive press-residue] with carbon disulphide, B., 363.

Bohn, H., adsorption of hydrogen and hydroxyl ions on animal charcoal. II. Measurement of the hydrogen-ion concentration of urine, A., 592.

Bohn Aluminum & Brass Corporation. See Roshirt, R. J.

Bohner, H., critical dispersion of lautal, B., 722.

Bohrisch, P., preparation and stability of tincture of iodine, B., 35. pine-needle extract, B., 339.

pine-needle extract and pine-needle bath extract, B., 871.

Bohrisch, Paul. See Busch, M. Bohunck, H. See Zehenter, J.

Boidin, A., determination of the strength of a bate, B., 296. Boie, H., and Lindner, A., determination of the bromine in

diuretin and its derivatives, B., 416.

Bois, C. See Alliott, E. A. Boise, C. W., and Degenhardt, W. R., disintegrating or mixing apparatus, (P.), B., 501\*.

Boissevain, C. H., and Webb, E., influence of anions and cations on the viability of Bacillus coli, A., 355.

Boistel, M. See Hugel, G.

Boivin, A., sulpho-chromic oxidation of carbonaceous substances; general wet method of micro-determination of carbon, A., 204.

micro-determination of carbon by Nicloux' method in dilute aqueous solutions, A., 1257.

micro-determination of carbon in solid substances by oxidation with chromic and sulphuric acids, A., 1323.

micro-determination of carbon in precipitates, A., 1323.

Boivin, A., and Roche, J., micro-determinations of carbon and nitrogen in facal material, A., 954.
Bojner, G., and Pehrson, A. H., apparatus for introducing air or

gaseous fluid into the charge in rotary furnaces, (P.), B., 461\*. Bokor, R. Sco Feher, D.

Boldt, E., respiration devices, (P.), B., 738.

Boldyreff, A. W. Seo Willard, H. H.

Bolgar, L., treatment of crude oils, tars, bituminous residues, etc., (P.), B., 1041.

Bolin, A. A., and Tschirch, A., autoxidation of French turpentino oils, B., 333

Bolin, I., stability maxima of some organic substances. II., A., 272.

Boller, W., determination of water by distillation with hydrocarbons, A., 528.

Bolliger, A., intravenous injection of phosphates, A., 1482.

Bolliger, A., and Breh, F., changes in the mineral constituents of the blood in experimental nephritis; scrum-potassium and -calcium, A., 717.

Bolliger, A., and Day, E. M., volumetrio determination of potassium in urine, A., 1099.

Bolliger, R. Seo De Camargo, T. Bollinger, G. See Ferrero, P.

Bollinger, G. M. See Jones, G.
Bollinger, K. M. Seo McElvain, S. M.
Bollman, J. L. Seo Markowitz, J., and Wilhelmi, C. M.

Bolm, F., the butyro-refractometer, B., 607.

Bolognesi, I., increasing the tensile strength of artificial silk, (P.), B., 714.

Bolsover, G. R., brittleness of mild steel, B., 397.

Bolton, J. A. See Hammersley, S. S.

Bolton, W. F. See Pulvo, Ltd.

Bolyard, N. W., and McElvain, S. M., piperidine derivatives.

VII. 1-Alkyl-4-piperidyl benzoates and p-aminobenzoates, A.,

Bomke, H., and Bergwerksverband zur Verwertung von Schutzrechten der Kohlentechnik G.m.b.H., preparation of hydrogen, (P.), B., 355. Bond, C. J., mode of action of irradiated ergosterol on the myelin

forms of lecithin, A., 1345.

Bond, P. A., and Stephens, W. R., systems formed by certain tetrahalides, A., 1375.

Bond, W. N., molecular lengths measured by an optical lever, A., 872.

relationship between h, c, and  $e^2$ , A., 1125.

Bondi, A. See Feigl, F.

Bondi, J., complement of the amylases. VII., A., 352.

Bondy, H. F. See Staudinger, H.

Bone, IV. A., combustion of well-dried carbon monoxide-oxygen mixtures, A., 654.

intensive drying of gaseous media, A., 1160.

Bone, W. A., and Fraser, R. P., photographic investigation of flame movements in carbon monoxide-oxygen explosions, A.,

Bone, W. A., Weston, F. R., and Winter, D. A., combustion of well-dried carbon monoxide and oxygen mixtures. III., A.,

Bonét-Maury, P., volatilisation of polonium, A., 485. Bonetti, S. See Antoniani, C.

Bonhoeffer, K. F., and Haber, F., band spectra and flame phenomena, A., 11.

Bonhoeffer, K. F., and Harteck, P., reaction of monatomic hydrogen with hydrocarbons, A., 409.

para- and ortho-hydrogen, A., 479, 732, 982, 1218.

parahydrogen, A., 732, 1372. homogeneity of water, A., 1218.

Bonhoeffer, K. F., and Reichardt, H., thermal decomposition of water vapour into hydrogen and free hydroxyl, A., 396.

Bonino, G. B., infra-red spectra of some halogen compounds, A., 740.

Bonino, G. B., and Brüll, L., Raman spectrum and geometrical isomerism; the Raman spectrum of the two forms of dichlorocthylene, A., 1361.

Bonino, G. B., and Cella, P., electric moments of molecules and

methods of determining them, A., 627.

Bonino, G. B., and Garello, A., metal-protein compounds. VII. Changes in physico-chemical properties of egg-albumin treated with cobalt powder, A., 336.

Bonino, G. B., and Vaglio, V., ionic radius and osmotic activity, A., 397.

calculation of heat of dilution by Debye and Hückel's theory, A., 883.

Bonino, G. B. See also Benedicenti, A., and Betti, M.

Bonnell, D. G. R., alumina gels, A., 26. Bonner, W. D. See Nims, L. F.

Bonnet, J., extraction of olive oil by the Acapulco process, B., 136.

Bonnet, R., behaviour of nitrogenous compounds during germin-

ation, A., 1204.
Bonniksen, C. W., laminated sheet glazing material, (P.), B., 323. Bonnot, L. C., and Bonnot Co., pulverising mill, (P.), B., 78.
Bonnot Co. See Bonnot, L. C.
Bonot, A. See Cahn, T.
Bonrath, W. See I. G. Farbenind. A.-G.

Bonsor, S., apparatus for ultra-violet ray treatment of flour, (P.), B., 416.

Bonwitt, G., preparation of artificial textile products with reduced

lustre from viscose, (P.), B., 203, 353.

Boock, E. See Trevan, J. W.

Booge, J. E. See Du Pont de Nemours & Co., E. L., and Grasselli Chem. Co.

Boohariwalla, D., Paranipe, G. R., and Prasad, M., electrical conductivities of liquid alkali-metal amalgams, A., 1225.

Boon, A. A., and Nisbet, H. B., some reactions of mm'-dinitro-

benzil, A., 1302.

Boon, G. B., and Stolley, Inc., R. R., purification of detergent [dry-cleaning] solutions, (P.), B., 895.

Boord, C. E. See Schaad, R. E.

Booth, C. F., Gerber, A. B., and Federal Phosphorus Co., manufacture of purification of the control of the

facture of neutral sodium phosphate, (P.), B., 718.

Booth, C. F., Gerber, A. B., and Logue, P., manufacture of saline trisodium phosphate, (P.), B., 53.

Booth, C. F. See also Carothers, J. N. Booth, G. IV., tunnel kiln, (P.), B., 305.

Booth, H. S. See Marshall, G. G.

Booth, J. See Campbell, W. G.

Booth, L. M., paper-making, (P.), B., 639. Boothby, W. M., Wilhemi, C. M., and Wilson, H. E. C., oxidation of dextrose in phloridzin glycosuria, A., 1335. Boothby, W. M. See also Mann, F. C.

Boot's Pure Drug Co., Ltd., and Marshall, J., manufacture of ketones, (P.), B., 911.

Boquet, A., Nègre, L., and Valtis, J., absorption of tuberculin

Boratyński. K. See Milobedzki, T.

Bordas, J., treatment of town refuse by fermentation in closed chambers (Beccari method), B., 455.

Bordeiann, C. V., colorimetric determination of phosphoric acid, A., 782.

volumetric determination of hexamethylenetetramine, A., 836. Borden Co., manufacture of evaporated milk, (P.), B., 110.

Boreas, M. J., favourable action of sulphur [on soils]; colloidal sulphur, B., 787.

Borel, J. See Rivier, H.

Borelius, G., results of the wave-mechanics calculation of the temperature relationship of the electrical resistance of puro metals, A., 754.

Borelius, G., Keesom, W. H., and Johansson, C. H., measurement of the thermo-electric Thomson effect down to the temperature of liquid hydrogen, A., 385.

Boresch, K., forcing [of plants] by warm baths. III., A., 360. Boresch, K., and Kreyzi, R., dependence of soil reaction on fertilisation and season, B., 616.

Borgen, H., and Wadsworth, G. W., apparatus for manufacture

of margarine, (P.), B., 705.

Borgeson, R. W., and Wilkinson, J. A., reactions in liquid hydrogen sulphide. VI. Reactions with organic compounds, A., 791. Borgström, L. H., determination of the m. p. of mineral sulphides and arsenides, A., 159.

Borgstrom, P., Wagner, F. C., and Griffin, H. C., preparation of magnesium n-butyl bromide, A., 920.

determination of mercaptans in naphtha, B., 1004.

Borgstrom, P. See also Bost, R. W. Borgwardt, E. See Chem. Fabr. auf Aktien (vorm. E. Schering). Borissov, P. I., Petrunkina, A., and Petrunkin, M., conditions for the combination of the grey matter of the brain with quinine, A., 1479.

Bork, A. C., nomenclature of inorganic compounds, A., 904. Bornand, E., and Schläpfer, H. A., electric furnace, (P.), B., 901. Bornhofen, E. See Wrede, F.

Bornstein, A., respiratory metabolism in eviscerated dogs, A., 1101.

decomposition of proteins and amino-acids of food as measured

by the ammonia [content] of the blood, A., 1334.

Bornstein, A., and Roese, H. F., production of ammonia from amino-acids in surviving organs, A., 1334.

Bornstein, A., and Schmutzler, E., lactic acid metabolism of the surviving hind-limbs, A., 1193. Bornstein, A., and Völker, H., behaviour of carbohydrates during

muscle perfusions, A., 1102. Borrel, C. See Cornubert, R.

Borsbach, E. See I. G. Farbenind. A.-G.

Borsche, W., and Bodenstein, C. K., constituents of kawa root. IX. Synthesis of yangonin, A., 1453.

Borsche, W., Müller, W., and Bodenstein, C. A., relation between quinonehydrazones and p-hydroxyazo-compounds. VI. p-Quinonedihydrazones from p-hydroxyazo-compounds, A., 1062.

relation between quinonehydrazones and p-hydroxyazo-compounds. VII. Aliphatic-aromatic pp'-dihydroxy- and diamino-bisazo-compounds, A., 1438.

Borsche, W., and Niemann, J., Hoesch syntheses with thiocyano-

benzene, A., 1064. Hoesch syntheses of phenolic ketones. III. Condensation of phenyleyanopyruvic esters with polyhydric phenols, A., 1309.

Borsche, W., and Peitzsch, W., constituents of kawa root. VIII. Kawaic acid, A., 442.

constituents of kawa root. VII. ψ-Methysticin, A., 443.

Borsche, W., Walter, C., and Niemann, J., Hoesch syntheses of phenolic ketones. II. Condensation of arylglyoxylonitriles with phloroglucinol, A., 806. Borsook, H. See Wasteneys, H.

Borvisk Syndicate, Ltd., and Borzykowski, B., artificial silk production, (P.), B., 677.

production of artificial formations from viscose, (P.), B., 975.

Borzykowski, B. See Borvish Synd., Ltd.
Bosart, L. W., and Snoddy, A. O., sp. gr. of glycerol, B., 88.
Bosch, F. J. G. van den. See Gen. Electric Co., Ltd.
Bosch, W. See Kolthoff, L. M.

Bosch Akt.-Ges., R., [holding plates in] electric storage batteries, (P.), B., 291.

Bosche, E. G. V. See Haring, M. M.

Bose, A. C., and Doran, W., sterol group. V. Constitution of cholesterilene, A., 1432.

Bose, C., test for protein in urine, A., 1099.

Bose, J. P. See Chopra, R. N.
Bose, P. K., and Sen, B. K., benzidine rearrangement in heterocyclic series. II., A., 79.

Bose, P. K. See also Bhattacharyya, T., and Das-Gupta, B. C.
Bose, S. N., and Mukherjee, S. K., beryllium spectrum in the region λ 3367—1964 Å., Λ., 365.
Bose-Rây, K. C. See Rây, P. C.

Boshamer, K., toxic action of diastase and cell injury, A., 92.

Boshell, G. See Arthus, M. Bossert, T. W., aluminium and its alloys in aircraft, B., 983. Bosshard, E., and Jaag, E., adsorption of gases and vapours by different kinds of silica gels, A., 256.

Bossini, R. F., and Maiuri, G., continuous absorption refrigerating

apparatus, (P.), B., 501.
Bossini, R. F. See also Maiuri, G.
Bossuyt, (Mile.) V. See Fosse, R.

Bost. G. W., and Electrofic Meters Co., Ltd., means for indicating quantities required for correct operation of continuous pro-

cesses, (P.), B., 308.

Bost, R. W., and Borgstrom, P., tin tetraphenyl as a phenylating reagent, A., 947.

Boswell, J. G. See Barton-Wright, G. C.

Boswell, P. F., and Blanchard, R., oxidation products derived from sphalerite and galena, A., 168.

Botchkarev, P. V., and Danilova, M. P., calcium content of blood of normal and thyroidectomised sheep, A., 1100.

Bothe, W., excitation of X-ray spectra by means of a-particles, A., 227.

range of H-particles, A., 230.

absorption due to scattering of cathode rays, A., 745.

Bothe, W., and Franz, H., X-radiation excited by a-particles, A., 227.

atomic disintegration, A., 621.

Bothe, W., and Kolhörster, W., absorption measurements with secondary  $\beta$ -rays, A., 116.

nature of penetrating radiation, A., 621. Bothwell, E. J. See Internat. Niekcl Co.

Botolisen, E., preparation of pure uranium, A., 1253.

apparatus for continuous purification of mercury, A., 1261. Bots, H. See Society of Chemical Industry in Basle.

Botschwar, A. A. See Tammann, G. Botsford, W. H. See Dwyer, T. A. W.

Botstiber, G. See Lustig, B.

Bottazzi, F., effect of proteins in diminishing surface tension, A., 642.

Bottomley, C. See Summers & Sons, Ltd., J.

Bottomley & Emerson, Ltd., J. C., and Earnshaw, W. D., dyeing of leather and manufacture of dyes for use therein, (P.), B.,

Boucher, C. L. See Shorter, A. E.

Boucket, L., electrolytic potentials of some metals, A., 769. Bouckert, J. P., Denayer, P., and Krekels, R., dextrose-insulin equilibrium, A., 959.

Bouda, B., Skelton, G. G., and Collis Co., desiccating apparatus, (P.), B., 740.

Bougault, J., and Leboucq, J., action of heat on allophanic amides, A., 940.

Bougault, J., and Leroy, (Mlle.) B., phenylhydroxymaleic anhydride, A., 558.

Bougault, J., and Popovici, L., reduction of semicarbazones of a-ketonic acids; semicarbazides substituted in a-position by acid residues, A., 1068.

Bouhet, C., elliptical polarisation produced by reflexion at the surface of solutions of fatty acids in water, A., 503, 981.

Bouillenne, M. See Dumont, P. Bouillenn, C. V., centrifugal machine, (P.), B., 740.

Boulade, A., and Société du Carburateur Zénith, filter, (P.), B., 192. Boulanger, P. See Polonovski, Michel.

Boulogne, B., device for interconnecting the evaporation elements of evaporation plants, (P.), B., 964.

Boulton, C. A., metallic alloy, (P.), B., 648. Bounhiol, respiration in excess of oxygen, A., 836.

Bourcet, P., determination of pilocarpine, B., 301.

Bourcet, P., and Fourton, A., the tannin of the purple digitalis, B., 957.

Bourdillon, R. B., Fischmann, C., Jenkins, R. G. C., and Webster, T. A., absorption spectrum of vitamin-D, A., 727.

Bourdillon, R. B. See also Webster, T. A.

Bourdouil, C. See Bridel, M. Bourgin, D. G., propagation of sound in gases, A., 637.

unimolecular reactions, A., 771.

sound propagation in gas mixtures, A., 1136. line structure, A., 1349.

Bourgin, D. G., and Libman, E. E., light-emission from atoms, A., 731.

Bourgois, P., cold vulcanisation [of rubber] (Parkes' process),

Bourguel, relation between the b. p. and molecular structure of cis-trans ethylenic, saturated, and acetylenic acids, A., 872.

Bourion, F., and Hun, (Mlle.) O., magnetism of hydrated zirconia,

A., 20, 249.

Bourion, F., and Rouyer, E., ebullioscopic determination of complexes formed by mercuric chloride and alkali chlorides; association of mercuric chloride, A., 139.

ebullioscopie measurements on resorcinol in lithium chloride solutions, A., 396.

Bourion, F., and Tuttle, C., cryoscopic determination of the molecular equilibria of resorcinol in aqueous solutions of potassium chloride, A., 648.

eryoscopic determinations of the molecular equilibria of resorcinol in aqueous solutions of sodium chloride, A., 759.

cryoscopic determination of the molecular equilibria of resorcinol in aqueous solutions of potassium chloride and of sodium chloride, A., 1236.

Bourjan, W. See Ohle, H. Bourn, J. M., growth of hæmophilic bacilli with certain iron salts, A., 220.

Bourquin, H., diabetes insipidus. III. The diuretic substance, A., 716.

Bousset, R., asymmetric synthesis, A., 788.

Boutaric, A., adsorption isotherms, A., 391.

stability of colloidal solutions, A., 1005.

Boutaric, A., and Doladilhe, M., electro-osmosis of mixtures of electrolytes, A., 134.

Boutaric, A., and Dupin, (Mlle.) M., flocculation of gold hydrosols, A., 393.

slow change in mixtures of colloidal solutions recalling anaphylactic effects, A., 1381

Boutaric, A., and Perreau, (Mlle.) G., study of the  $p_{\rm H}$  values at which flocculation is produced in sols of arsenious sulphide and of ferric hydroxide, A., 879.

acidity-dilution and neutralisation curves for a sol of arsenious

sulphide and a suspension of gamboge, A., 1380. Boutaric, A., and Semelet, C., flocculation of arsenious sulphide sols by thorium chloride, A., 762.

Boutier, D. Sco Baume, G.

Boutiron and Genaud, determination of the mineral constituents of rabbit's and dog's muscle, A., 1098.

Boutroux, A. See Grigaut, A.

Bouwers, A., Sande Bakhuyzen, W. H. van de, and Naamlooze Vennootschap Philips' Gloeilampenfabrieken, X-ray tube, (P.),

Bouyoucos, G. J., hydrometer method for making a very detailed mechanical analysis of soils, B., 222.

determination of the moisture equivalent of soils and the rôle of soil colloids on this moisture equivalent, B., 407. ultimate natural structure of soils, B., 730.

Bovini, F., use of o-crosol in working-up middle tar oil, B., SS. Bovis, P., absorption of light by bromine and iodine, A., 1207.

Bowater, N. J., Lymn, A. H., and Chamber Ovens, Ltd., intermittent carbonising plant, (P.), B., 272.

Bowater, N. J. See also Lymn, A. H. Bowden, F. P., amount of hydrogen and oxygen present on the surface of a metallic electrode, A., 1391.

Bowden, R. C. See Evans, P. H.
Bowditch, F. T. See Bagley, G. D.
Bowen, E. J., and Cavell, A. C., [glow produced by] oxidation of phosphorus vapour, A., 1252.

Bowen, E. J., and Yarnold, E. T., photochemical oxidation of ethyl alcohol by potassium dichromate. II., A., 1152.

Bowen, I. S., presence of sulphur in the gaseous nebulæ, A., 536. additional series lines in the spectra of C II and N II, A., 1117.

Bowen, I. S. See also Russell, H. N.

Bowen, N. L., and Schairer, J. F., system leucite-diopside, A.,

Bowen, S. P., tuyères for blast furnaces, etc., (P.), B., 781.

Bowen, W. S., centrifugal disintegrator for liquids, (P.), B., 80. separation and liquefaction of gases, (P.), B., 116, 420. spray drying, (P.), B., 452.

Bower, J. See Brit. Celanese, Ltd.

Bowers, P. C. See Du Pont de Nemours & Co., E. I.

Bowes, E. A. See Martin, Geoffrey.

Bowles, J. A. C., and James, C., preparation of phosphenyl chloride, A., 945.

Bowmaker, E. J. C., durability of [glass] tank blocks, B., 815.

Bowran & Co., Ltd., R., and Craggs, J. W., heat non-conducting composition [in paste form], (P.), B., 980.

Bowyer, J. See Callender's Cable & Construction Co., Ltd. Boyce, J. C., and Compton, K. T., higher spark spectra of neon and argon in the extreme ultra-violet, A., 1206.

Boyce, J.C. See also Compton, K.T.Boyoe-Ite Products, Inc. See Orelup, J. W.

Boyd, D. R., and Vineall, G. J. C., reaction between magnesium phenyl bromide and phenylglycide, A., 1065.

Boyd, G. L., Couriney, A. M., and Maclachlan, I. F., metabolism of salts in nephritis. I., II., and III., A., 344.
Boyd, J. D. See Hines, H. M.

Boyd, T. C., and Ray, A. C., cholesterol content of Indian blood in health and leprosy, A., 1101.

Boyd, W. J., determination of tryptophan by means of p-di-

methylaminobenzaldehyde, A., 478.

Boyden, R. E. See Gerstley, J. R. Boyer, T. See Taylor, William.

Boyes, W. N., manufacture of cereal meals, (P.), B., 1030.

Boykin, R. O., and Vail, N. R., extraction of oils from oleaginous materials, (P.), B., 947.

Boyland, E., phosphoric esters in alcoholic fermentation. I. Sequence of the formation of phosphoric esters and carbon dioxide in fermentation by dried yeast, A., 607.

Boyle, C. See Reilly, J. Boyle, M. See Moore, J. See Moore, T. S.

Boyle, R. W., Lehmann, J. F., and Morgan, S. C., measurements

of ultrasonic velocities in liquids, A., 384.

Bozel-Malétra Soe. Ind. de Prod. Chim., thermal disintegration of chrome ores or minerals containing chromium, (P.), B., 945. Bozorth, R. M., Barkhausen effect in iron, nickel, and permalloy. I. Measurement of discontinuous change in magnetis-

ation, A., 1224. Bozza, G., hydraulic classification of minerals, B., 559.

Bozza, G., and Sonnino, C., aluminium-calcium alloys, A., 24.

Bozza, G. See also Cambi, L. Braak, T. ter. See Biilmann, E.

Bracaloni, L., micro-determination of the water-content of blood, A., 89.

Brace, P. H., and Westinghouse Electric & Manufacturing Co., thermostatic element, (P.), B., 61.

Brachmann. See Schapiro, N. Brackett, F. S., characteristic differentiation in the spectra of saturated hydrocarbons, A., 119.

Brackett, F. W., rotary filter or strainer, (P.), B., 840\*.
Brackett, R. See Gemmill, R.
Bradbury, T. F. See Hall, H. C.
Braddick, H. J. J., and Cave, H. M., rate of emission of α-particles from radium, A., 6.

Braddock-Rogers, K., action of air-carbon tetrachloride vapour mixtures on several natural sulphides, thioarsenites, and thioantimonites, A., 896.

action of air-carbon tetrachloride vapour mixtures on certain natural and artificial sulphides, selenides, and a telluride, B., 328.

Braden, S. See Edmunds, C. W.

Bradfield, A. E., and Jones, Brynmor, chlorination of anilides. V. Significance of velocity measurements in relation to the problem of benzene substitution, A., 34.

Bradfield, A. E., and Orton, K. J. P., transformation of phenyl-nitroamines into nitroanilines. I., A., 804.

Bradfield, R., and Zocher, H., double refraction of bentonite, A.,

Bradley, A. J., crystal structure of Cu, Al, A., 125.

Bradley, A. J., and Gregory, C. H., structure of some ternary

alloys of copper, zinc, and aluminium, A., 500.

Bradley, C. E., Gibbons, W. A., and Nangatuck Chemical Co., coating composition, (P.), B., 444.

Bradley, H., McKay, A. T., and Worswick, B., moisture in leather. I. and II., B., 446, 566.

Bradley, H. F., [determination of copper], B., 359.

Bradley, L., and McKeefe, E. P., bleaching of pulp, (P.), B., 470.

production of [wood] pulp, (P.), B., 894.

Bradley, L., McKeefe, E. P., and Bradley-McKeefe Corporation, production of alkali carbonates, (P.), B., 323\*.

production of caustic alkali, etc., (P.), B., 432.

treatment of residual liquors [from production of wood pulp], (P.), B., 432,

production of composite cooking liquor, (P.), B., 975.

Bradley, R. L. See Fuson, R. C.

Bradley, R. S., adsorption of the alkali metals on a mercuryvacuum interface, A., 257.

adsorption on the surface of binary liquid mixtures, A., 390. lattice energy of LiH and the normal potential of H-, A., 1125. linear adsorption, A., 1376.

Bradley, W., and Schwarzenbach, G., acylation of diazomethane; formation of chloroacetophenone from benzoyl chloride, A., 68. Bradley-Fitch Co., treatment of materials for the concentration of iron contained therein, (P.), B., 983.

recovery of manganese values from solutions containing mangancse, (P.), B., 985.

treatment of ores containing manganese, (P.), B., 985.

Bradley & Foster, Ltd., and Bethell, R. P., [stirring device for] production of pig iron, (P.), B., 330. Bradley-McKeefe Corporation. See Bradley, L.

Bradner, D. B., purification of organic compounds [chlorophenarsazine], (P.), B., 453.

Bradner, D. B., and Beall, F. H., manufacture of dinitrophenol,

(P.), B., 807.

Bradner, D. B., and Champion Coated Paper Co., production of chemical wood pulp, (P.), B., 638.

Bradshaw, G. W., and Jackson, E. R., apparatus for [solvent]

extraction of oils, fats, etc. from substances containing the same, (P.), B., 103.

Bradshaw, H. See Du Pont de Nemours & Co., E. I.

Bradshaw, I., and Livens, G. H., formula for the optical rotatory dispersion of quartz, A., 242.

Bradshaw, J. R., corrosion in cast-iron main pipes, B., 558. Bradshaw, L., and Dunham, H. V., adhesive material and its

manufacture, (P.), B., 568.

Bradshaw, W. H. See Du Pont Rayon Co.

Bradt, W. E., and Brown, O. W., electrolytic preparation of 2:4diaminophenol, A., 1291.

Brady, E. J., and United Gas Improvement Co., apparatus for effecting contact between gases and divided solids, (P.), B., 1000

Brady, O. L., and Chokshi, N. M., isomerism of the oximes. XXXIV. Dissociation constants of isomeric oximes and their influence on the production of the isomerides in alkaline solution, A., 705. isomerism of the oximes. XXXVI. Methylation of aldoximes

and ketoximes, A., 1450. Brady,  $O.\ L.$ , Day, J.N.E., and Reynolds,  $C.\ V.$ , reduction of nitrocompounds in pyridine solution, A., 1437.

Brady, O. L., and Peakin, F. H., action of semicarbazide hydro-

chloride and 2:4-dinitrophenylhydrazine hydrochloride on aldoximes and their derivatives, A., 558. isomerism of the oximes. XXXV. Amidoximes, A., 1446.

Bräkken, H., crystal structure of titanium monoxide, A., 631 Bräkken, H., and Harang, L., crystal structure of some rhombic

compounds MX<sub>2</sub>, A., 631. Braendle, H. A. See Wiegand, W. B.

Bragg, G. A., efficient dehydration of [coal] gas at low cost, B.,

Bragg, W. L., determination of parameters in crystal structure by means of Fourier series, A., 748.

atomic arrangement in the silicates, A., 749.

diffraction of X-rays by two-dimensional crystal lattice, A., 984. Bragg, W. L., and West, J., technique for X-ray examination of crystal structures with many parameters, A., 1223.

Bragg, W. L. See also Warren, B. Brahm, C., [with Andresen, G., and Prillwitz, R.], sterilisation of green fodder by liquids, B., 185.

Brain, W. R. See Gosden, M. Brainard, S. W. See Rhodes, F. H.

Bramley, A., and Lord, H. D., gaseous cementation of iron and steel. VI. Nature of the diffusion of carbon, B., 920.

Bramley-Moore, S., crushing, grinding, and refining machine, (P.), B., 154. linings for grinding, refining, and mixing machines, (P.), B., Bramston-Cook, H.E. See Marshall, M.J.

Bramwell, B., [sand] filters, (P.), B., 3. Bramwell, F. H., and Atmospheric Nitrogen Corporation, heattransferring apparatus, (P.), B., 461\*. high-pressure joint, (P.), B., 761\*.

Bramwell, I. L. See Appleyard, K. C.
Brand, J. J. C., and Laing, B., [dust] filters, (P.), B., 3.
utilisation of pulvorulent or powdered carbonaceous fuel in boiler furnaces, (P.), B., 625.
Brand, K., and Pabst, H., thiophenols. XII. Triphenylmethane

series, A., 61.

Brand, T. von. See Holtz, F.

Brandau, G. See Rassow, B.

Brandenberger, O., and Zahner & Schiess & Co., lead [paint] coating of articles, (P.), B., 651\*

Brandes, A., and Richter, P. O. H., accumulator with negative zinc electrodes, (P.), B., 25.

Brandes, H., electrolytic polarisation due to retarded crystal

growth, A., 886. Brandes, W. W., and Simonds, J. P., blood-sugar after peptone injection in the dog, A., 96.

Brandl, O. See Moser, L.

Brandon, G. E. See Barrett Co.
Brandsma, W. F. See Romp, J.
Brandt, R., electrolytic revivification of potassium ferrocyanide formed in the purification of gases by oxidation of hydrogen sulphide with potassium ferricyanide, (P.), B., 978.

oxidation of potassium ferrocyanide to potassium ferricyanide, (P.), B., 978\*.

Brandwood, J., fluid treatment of artificial silk threads or filaments, (P.), B., 555, 977.

treatment of textile fabrics with fluids, (P.), B., 640. Brandwood, J., and Brandwood, T., collapsible spindle for dyeing and analogous treatment of wound yarns, (P.), B., 243.

Brandwood, T. See Brandwood, J. Brann, B. F., and Clapp, M. N., electrometric titration of manganese by the Volhard method, A., 286.

Bransky, O. E., Rogers, F. M., and Standard Oil Co., handling heavy oil residues, (P.), B., 634.
Branting, B. F. See Smith, D. F.

Brasefield, C. J., some peculiar hydrogen bands, A., 963.

densities of hydrogen spectral lines as a function of the electronic velocity of excitation, A., 1115.

Brasington, C. P., and International Printing Ink Corporation, conveyance of viscous substances, (P.), B., 499.

Brass, J. See Wheeler, R. V. Brassert, H. A., Dougan, C. E., Maltitz, E. von., and Brassert & Co., H. A., gas-washing apparatus, (P.), B., 741. Brassert, H. A. See also Andrews, C. W.

Brassert & Co., H. A. See Brassert, H. A. Brattain, W. H., efficiency of excitation by electron impact and anomalous scattering in mercury vapour, A., 1119.

Bratton, G. S., and Anheuser-Busch, Inc., aerobic fermentation, (P.), B., 1029.

Brauchli, E. See Häussler, E. P.

Brauckmeyer, R., degressing raw wool, (P.), B., 51\*.
Brauer, E., boiling points of binary mixtures of ethereal oils, B., 1031.

Braumann, L. See Richet, C. Braun, C. F., bubble still, (P.), B., 876. Braun, E. See Kuhn, W.

Braun,  $G_{\cdot}$ , oxidation of unsaturated compounds. I. Oxidation of crotonic and isocrotonic acids, of y-isocrotonolactone, and of maleic anhydride, A., 293.

Braun, H., and Goldschmidt, R., metabolism of Bacillus coli and paratyphosus-B, A., 1108.

Braun, J. von, [preparation of] pentamethylene bromide, A., 1038. action of piperidine on ethyl ac'-dibromoadipate, A., 1042.

Braun, J. von [with Anton, E., Haensel, W., and Werner, G.], thermal and hydrolytic decomposition of basic and phenolic diphenylmethane derivatives and synthesis of optically active aromatic compounds, A., 1058.

Braun, J. von, and Anton, E., hexahydrofarnesal and norhexahydrofarnesal, A., 910.

Braun, J. von, Anton, E., and Wagner, Hans, benzopolymethylene compounds. XV. Composition, constitution, and synthesis of fluoranthene, A., 307.

Braun, J. von, and Bayer, O., catalytic hydrogenation under pressure in presence of nickel salts. XIII. a. and β-Hydroxy- and -amino-anthracenes, A., 1057.

Brann, J. von, and Heymons, A., constitution of isocampholic acid. II., A., 62.

imide and amide chlorides of non-aromatic acids. III., A., 432. Braun, J. von, Kröper, H., and Reinhardt, W., determination of configuration in the terpene series. III., A., 819.

Braun, J. von, and Manz, G., relative ease of formation of 5-, 6-, and 7-membered carbon rings, A., 561.
benzopolymethyleno compounds. XIV. Isomerisation of 1-

to 2 arylindenes by heat, A., 688.

Braun, J. von, Manz, G., and Reinsch, E., ease of substitution of aromatically bound hydrogen atoms, A., 562.

Braun, J. von, and Reinhardt, W., determination of configuration in the terpene series. IV. Optically active isopropylsuccinic acids, A., 1424.

Braun, J. von, Teuffert, W., and Manz, G., preparation of aldehydes and ketones by degradation of quaternary ammonium bases, A., 296.

Braun, J. von, Teuffert, W., and Weissbach, K., decomposition of quaternary ammonium and sulphonium hydroxides. IV., Ā., 1046.

Braun, J. von, and Weissbach, K., cyclic sulphides. IV., A., 1310. Braun, J. von, and Werner, G., determination of configuration in the terpene series. II. Optically active forms of \$\beta\$-isopropyladipic acid and their relationship to the optically active limonenes, A., 679.

Braun, K., and Walter, E., determination of sugar in soaps and

soap preparations, B., 946. Braun, L. See Grimm, H. G.

Brann, W., and Bleyer, B. [with Elhardt, W.], determination of maltose and dextrose, A., 205.

Braune, H., Basch, R., and Wentzel, W., viscosity of gases and

vapours. II. Mercury, cadmium, and zinc, A., 23. viscosity of gases and vapours. I. Air and bromine, A., 24. Braune, H., and Strassman, F., solubility of iodine in gaseous carbon dioxide, A., 1229.

Braunholtz, W. T. K., recent research on production and utilisation

of coke, B., 581.

Braunholtz, W. T. K., Nave, G. M., and Briscoe, H. V. A., correlation of physical and chemical properties of cokes with their value in metallurgical processes. II., B., 840. Braunholtz, W. T. K. See also Deakin, J. B.

Brauns, D. H., optical rotation and atomic dimensions. Halogenohepta-acetyl derivatives of melibiose and maltose; structures of bioscs and of cellulose, A., 913.

Braunstein, A. E., micro-determination of blood-phosphate, A.,

Braunstein, A. E. See also Engelhardt, W. A.

Bravo, G. A., determination of acidity in tanning liquids, B., 335. chrome tanning, B., 786.

Bray, G. R. See British Thomson-Houston Co., Ltd. Bray, M. W., determination of cellulose and amount of chlorine consumed in its isolation, B., 279.

Bray, M. W. See also Peterson, C. E., and Schafer, E. R. Bray, R. N., determination of replaceable sodium in alkali and

non-alkali soils, B., 407. Bray, R. H., and Willhite, F. M., determination of total replaceable bases in soils, B., 788.

Brayshaw, S. N. See Brayshaw Furnaces & Tools, Ltd.

Brayshaw Furnaces & Tools, Ltd., and Brayshaw, S. N., conveyor furnaces [for heat-treating metals, etc.], (P.), B., 361.

Brazier, S. A., and Ridgway, L. A., influence of zinc oxide on the coefficient of vulcanisation [of rubber], B., 181.

Brazier, S. A. See also Macintosh & Co., Ltd., C.

Brazil, V., and Vellard, J., rôle of lipins in immunisation, A., 340. Breaker, H. O., heat-treating [electric] furnace, (P.), B., 135. Breazeale, J. F., effect of one element of plant food on the absorp-

tion by plants of another element, B., 654.

soil zeolites and plant growth, B., 731.

Breazeale, J. F., and Magistad, O. C., base exchange in orthoclase, B., 730.

Brecher, L., inorganic constituents of the blood of pupæ of butterflies (Sphynx pinastri, Pieris brassica) and changes in the content of these constituents during the pupal stage, A., 1326.

Brecht, H. A., tanning properties of dyewood extracts, B., 567. Brecht, K. G., Scherer, R., and Hanemann, H., tungsten steel for magnets, B., 211.

Breekenridge, J. M. See also Smith, G. M. Bredée, H. L. See Cohen, E.

Bredig, G., and Bayer, R., vapour pressure of mixtures, A., 873.

Bredig, G., Carter, S. R., and Enderli, M., equilibrium of carbon dioxide decomposition of formic acid and its potential, A.,

Bredig, G., Koenig, A., and Wagner, O. H., formation of hydrazine from ammonia by electrical discharges, A., 406.

Bredig, G., and Stark, A., topochemistry of catalysis of decomposition of hydrogen peroxide by mercury, and p<sub>H</sub> for pulsation, A., 520.

Bredt, J. [with Ahrens, H., and Scholl, P.], Manasse's a- and  $\beta$ -hydroxycamphors (ortho-exo-, and ortho-endo-hydroxycamphors). II., A., 571.

Bredt, J., and Bredt-Savelsberg, M., constitution of Manasse's β-hydroxycamphor and a new method of preparing epicamphor. III., A., 1308.

Bredt, T., microscopical investigations on the carbonatation process, B., 789.

Bredt-Savelsberg, M. See Bredt, J.

Bredtschneider, K., hermetic closures for pressure vessels, (P.),

Breed, R. S., heat-resistant and heat-loving bacteria in their relation to the pasteurisation of milk, B., 300.

Breed, R. S. See also Pederson, C. S.

Breh, F. See Bolliger, A.

Brehm, J. R., manufacture of cheese, (P.), B., 451.
Brehmer, W. von, effect of anions of potassium salts on potato heads and the effect of root activity on the soil, B., 732.

Breisig, A., apparatus for producing gas and coke in alternatelyworking water-gas generators, (P.), B., 87.

utilisation of the heat of the waste gases of alternately-working gas generators and that of the produced gas, (P.), B., 969.

Breit, G., effect of rotardation on the interaction of two electrons, A., 1125.

Bremer, K. See Stobbe, H. Bremond, E. See Fabre, J.

See Fabre, J. H.

Brémond, H. M. L., determination of water-soluble arsenieus acid in Schweinfürth green, B., 948.

Bren, B. C. See Raiford, L. C.

Brenchley, W. E., phosphate requirement of barley at different periods of growth, B., 370.

Brendel, B., Mittelstaedt, O., and Sack, H., dispersion of electrolytic conductivity, A., 1240.

Brendel, C. See Spengler, O.

Brendel, H., rapid testing of varnish raw materials [resins], B., 137. Brender a Brandis, G.  $\overline{A}$ ., and Do Goey, H. J. A., evaluation of gas coal, B., 877.

Brenek, H. See Rothe, F.

Brennecke, E., rapid electrolytic deposition of cadmium and zinc and their separation by regulation of the voltage, A., 164.

Brennecke, E. See also Merz, A. Brennen, H. J., new equation of state, A., 252.

Brenner, W., alleged acidification of soil samples on drying, B., 654.

Brentano, J., intensity measurements on X-rays scattered by crystalline powders, A., 244.

Brentano, J., and Adamson, J., precision measurements of X-ray reflexions from crystal powders; lattice constants of zinc carbenate, manganese carbonate, and cadmium oxide, A., 493.

Breslauer, J., De Luserna, E., and Société d'Études Chimiques pour l'Industrie, rendering calcium cyanamide free from dust, (P.), B., 244.

Brestkin, M. P. See Prikladovitzki, S. L.

Bretscher, E., electric moment and structure of derivatives of diphenyl, A., 980.

Bretscher, E. See also Ebel, F.

Bretschneider, H. See Holter, H.

Breuers, W. See Bergmann, M.

Breuning, E., and Electric Storage Battery Co., production of thin nickel flakes, (P.), B., 440\*.

Breuning, E., Schneider, O., and Electric Storage Battery Co., manufacture of nickel flakes for use as admixture in the active material of alkaline accumulators, (P.), B., 986\*.

Breusch, F. See Späth, E., and Staudinger, H. Brewer, A. K., and Westhaver, J. W., synthesis of ammonia in the glow discharge, A., 891.

Brewer, G. See Eagle, H. Brewer, R. E., and Harding, E. P., modification of Parr's total carbon determination in coal, B., 762.

Brewer, R. E., and Montillon, G. H., measurements of hydrogenion concentration in plating baths, B., 648. Brewer & Co., Inc. See Nahikian, K. M.

Brewster, O. C., and Standard Oil Co., conversion of hydrocarbon oils, (P.), B., 234.

Brewster, R. Q. Sec Dains, F. B.

Breyer, P. G., Bunce, E. H., and New Jersey Zinc Co., reduction of zinciferous materials, (P.), B., 563\*.

Breyer, F. G., Farber, C. W., and New Jersey Zinc Co., [manufacture of] lithopone, (P.), B., 138.

Breyer, F. G., and New Jersey Zinc Co., condensing zinc vapour, (P.), B., 687\*.

Breyer, II., disincrusting and purifying composition for boiler feed-water, (P.), B., 76

Breyer, H. See also Lacroix, M.

Brice, B. A., and Jenkins, F. A., new ultra-violet band spectrum of hydrogen chloride, A., 864.

Brichta, I., thermodynamic consideration of certain reactions, A, 1145.

Bricker, F., inflammation and condition of irritation and stimulation. I. Gas metabolism. II. Sugar metabolism, A., 92.

Brickwedde, F. G. See Wait, G. R. Bridel, M., l-asparagine in the fresh flowers of Ulcx europæus, A., 477, 961\*

variation of colour of plants during desiccation; glucoside of Lathraa clandestina, L., is aucubin, A., 857, 1204\*.

Bridel, M., and Bourdouil, C., transformation of carbohydrates during the ripening of bananas, A., 1345.

Bridel, M., and Desmarest, M., preparation of gentianose from gentian root without fermentation, A., 856, 1113.

Bridel, M., and Grillon, (Mile.) S., methyl salicylate glucoside of Gaultheria procumbens, L., identical with monotropitin, A., 299\*, 857\*.

presence of monotropitin in Gaultheria procumbens, L., after drying, A., 613, 857\*.

Bridge, S. W. Sce Stephenson, J. E.

Bridgeman, O. C., Joule—Thomson effect and heat capacity at

constant pressure for air, A., 1136.

Bridgeman, O. C., and Marvin, C. F., jun., auto-ignition temperatures of liquid fuels, B., 85.

Bridgeman, O. C. See also Beattie, J. A. Bridger, C. J. See Smith, H. G. Bridgess, M. P. See Allen, C. F. H.

Bridgman, P. W., transformations of rubidium halides by pressure, A., 140.

resistance and thermo-electric phenomena in metal crystals, A., 248, 1136.

effects of pressure on the properties of matter, A., 867. compressibility and pressure coefficient of resistance of zirconium and hafnium, A., 1135.

offect of pressure on the resistance of three series of alloys, A., 1138.

Bridgman, P. W., and Conant, J. B., irreversible transformations of organic compounds under high pressures, A., 1243. Bridgwater, E. G. Sco Du Pont de Nemours & Co., E. I.

Briefer, M., and Cohen, J. H., food gelatin values relative to concentrations, B., 369.

Briefer, M. See also Davis, C. E.

Briegleb, G., dynamic allotropic state of selenium, A., 250.

Briesemeister, S. Seo Clans, W.
Brigando, J. Seo Porcher, C.
Briggs, A. J., and Onondaga Steel Co., Inc., metallurgical furnace,
(P.), B., 58, 329.

production of wrought iron, (P.), B., 603.

Briggs, A.S. See Briggs & Sons, Ltd., W. Briggs, D.R.  $\zeta$ -potential and the lyotropic series, A., 27.

surface conductance, A., 1146.

Briggs, D. R. See also Kruyt, H. R. Briggs, F. See Denis, W.

Briggs, G. E., vegetable assimilation and respiration. XX. Photosynthesis in green plants, A., 960.

Briggs, L. H., and Short, W. F., oxidation of dipinene, A., 191.

Briggs, S. H. C., metallic chromates, A., 411.

chromatocobaltiammines. II. Dichromatotetramminecobaltiates and the maximum co-ordination number of cobalt, A., 665.

Briggs, T. R., McDuffe, R. O., and Willisford, L. H., germanium, XXXI. Alloys of germanium: silver-germanium, A., 996. Briggs & Sons, Ltd., W., and Briggs, A. S., [metal-coated] bitumin-

ous roofing or damp-proof course and its preparation, (P.), B., 777.

Brigham, G. D. See McAlpine, J. G.

Bright, A. A., and Larrabee, C. P., determination of manganese in steel and iron by the persulphate-arsenite method, B., 1017.

Brightman, R. See Imperial Chem. Industries, Ltd.

Brigl, P., and Keppler, H., carbohydrates. VI. Derivatives of 1-aminoglucose, A., 429. Brigl, P., and Schinle, R., carbohydrates. VII. Starch acetate,

A., 299.

carbohydrates. VIII. aβ-Derivatives of dextrose, A., 1043. Brikker, F., inflammation. V. Acetone substances in the blood of inflamed tissue, A., 1192.

Brikker, F., and Lazarin, I., inflammation. IV. Nitrogen

exchange in the initial stage, A., 1192.

Brikker, F., and Suponitzki, F., inflammation. III. Carbohydrate metabolism in inflamed tissue during the initial stage, A., 1192.

Brill, R., determination of particle size by means of X-rays, A., 746.

crystal lattice of Fe, N, A., 748.

Brill, R., and Meyer, K. H., lauric acid, A., 751.

Brillo Manufacturing Co., Inc., and Field, C., making of metal wool, (P.), B., 1020.

Brillouin, L., is it possible to test by a direct experiment the hypothesis of a spinning electron?, A., 7.

Sommerfeld's electronic theory of metals and the mean free path of electrons, A., 373.

Brindley, G. W., refractivity of gaseous compounds, A., 380, 744. structure of the CH, molecule, A., 629.

distribution of charge in the earbon atom, A., 973. Brindley, G. W., and Wood, R. G., distribution of charge in the chlorine ion in rock salt, A., 493.

Brindley, G. W. Sec also James, R. W. Briner, E., Lunge, G. H., and Wijk, A. van der, reaction between nitrogen peroxide and sulphur dioxide, A., 40.

Briner, E., and Meier, R., ozonisation of gaseous unsaturated hydrocarbons. III. Butenes, aldehydes, and acetone, A., 674. Briner, E., and Rivier, A., chemical action of electric discharge.

I. Effect of nature of electrodes on production of nitric oxido in electric arc, A., 1247.

Briner, E., and Schnorf, P., ozonisation of gaseous unsaturated hydrocarbons. I. Ethylene. II. Propylene and a "cracking gas," A., 290.

Briner, E., and Wunenburger, R., ozonisation of unsaturated gaseous hydrocarbons. IV. Ozonisation of acetylene, A., 1037. Briner, E. See also Berthoud, A.

Brink, R. A., dynamics of the waxy gene in maize. II. Nature of waxy starch, A., 360.

Brinkley, J. M., mixing apparatus, (P.), B., 740. Brinkmann, G. See Schenck, R.

Brinkmann, G. See Schenck, R. Brinton, P. H. M.-P. See Pagel, H. A.

Briutzinger, H., reduction bead test as a simple preliminary test,

Brintzinger, H., and Schieferdecker, W., potentiometric determination of titanium in the presence of other metals, especially iron, A., 417.

potentiometric determination of iron and molybdenum [in presence of each other], A., 1159.

Brintzinger, H., and Troemer, B., molecularly dispersed silicie acid, A., 1003.

Briod, A. E., Winkle, R. van, Jurist, A. E., and Christiansen, W. G., some analytical aspects of cod-liver oil, B., 861.

Briod, A. E. See also Jones, W. S.

Brioux, C., and Jouis, E., activo lime of dephosphoration slags and of so-called disaggregated phosphates, B., 732.

Briscoe, H. T. See Hunt, H. Briscoe, H. V. A., Peel, J. B., and Robinson, P. L., production of thiophen by the interaction of acetylene and carbon

disulphide, A., 73. carbon sulphidoselenide, A., 410.

effect of intensive drying on certain physical properties of benzene, A., 498.

reactions of the halogens with carbon sulphidoselenide, A., 778. Briscoe, H. V. A., Peel, J. B., and Rowlands, J. R., interaction of carbon tetrabromide with sulphur and selenium, A., 1155. Briscoe, H. V. A. See also Braunholtz, W. T. K., and Sayce, L. A.

Brissimdji, S. See Scholl, R.

British Alizarine Co., Ltd., and Beghin, P., pyranthrone dycs, (P.),

British American Laundry Machinery Co., Ltd., and West, G. H., machines for treating fabrics by processes such as washing, dry-cleaning, etc., (P.), B., 515.

British Bead Printers, Ltd. See Heynert, F. A. H. British Booklet Matches, Ltd. See Käppler, F.

British Celanese, Ltd., treatment [manufacture of ribbons or webs from pieces] of fabrics containing cellulose derivatives, (P.), B., 14, 242.

treatment of organic derivatives of cellulose, (P.), B., 126. dycing of textile fibres, films, etc., containing cellulose esters or ethers, (P.), B., 169.

treatment of fabrics containing cellulose derivatives, (P.), B., 203.

[cutting non-fraying tape from] fabrics containing cellulose derivatives, (P.), B., 204.

manufacture of [moiré patterned] fabrics or textilo materials, (P.), B., 279.

treatment [fireproofing] of fabrics or other materials or articles

made from combustible material, (P.), B., 281. treatment of materials consisting of cellulose derivatives; [preservation of lustre of acctate silk], (P.), B., 353.

coloration of [cellulose ester or ether] fabrics, (P.), B., 811. treatment of fabrics [of acetate silk, etc.], (P.), B., 716.

[marking] ink, (P.), B., 728.

manufacture of embossed knitted fabrics, (P.), B., 848. improving [raising the ironing temperature of] textile and other materials, (P.), B., 1012.

British Celanese, Ltd., Bader, W., and Green, S. J., manufacture of methyl alcohol and [catalytic] agents for use therein, (P.), B., 315.

British Celanese, Ltd., and Bower, J., [spinning] apparatus for manufacture of artificial threads or filaments, B., 14.

British Celanese, Ltd., and Dickie, W. A., manufacture or treatment [cutting] of textile products, (P.), B., 279.

British Celanese, Ltd., Dickie, W. A., Platts, T. H., and Latham, L., manufacture of [twisted] yarns or threads, and apparatus therefor, (P.), B., 243.

British Celanese, Ltd., and Dreyfus, H., manufacture of artificial filaments or threads by the dry or ovaporative method, (P.), B., 810.

British Celanese, Ltd., Dreyfus, H., Ellis, G. H., Ockman, T., and Olpin, H. C., dyeing, printing, or stencilling, of materials containing cellulose derivatives [esters or ethers], (P.), B., 894.

British Celanese, Ltd., Dreyfus, H., and Haney, C. I., manufacture of aliphatic [acetic] anhydrides, (P.), B., 235, 275.

British Celanese, Ltd., Dreyfus, H., Kinsella, E., Bower, J., and Taylor, W. I., production of artificial filaments or threads, (P.), B., 203, 353.

British Celanese, Ltd., and Ellis, G. H., treatment [loading, mordanting, or dyeing] of materials containing cellulose derivatives [esters or ethers], (P.), B., 169.

treatment of textiles, (P.), B., 353. treatment of materials containing cellulose derivatives, (P.),

production of black colorations on mixed materials containing organic derivatives [esters or ethers] of cellulose, (P.), B., 678. coloration of materials comprising celluloso derivatives [esters and ethers], (P.), B., 678

production of pattern effects [by discharge printing] on materials containing cellulose esters or ethers, (P.), B., 678.

production of [photographic] pattern and similar effects on materials containing cellulose esters, (P.), B., 679.

coloration of fabrics containing cellulose derivatives [esters], (P.), B., 716.

British Celanese, Ltd., Ellis, G. H., and Ellison, T., dyeing of cellulose [ester or ether] derivatives [in package or wound form], (P.), B., 678.

British Celanese, Ltd., Ellis, G. H., and Olpin, H. C., dycing, etc. of materials containing celluloso esters or ethers, (P.), B., 15, 127.

coloration of materials containing cellulose acetate, (P.), B., 281.

colouring of cellulose derivatives, (P.), B., 354. treatment [mordanting and weighting] of cellulose derivatives

[esters and ethers] and products made therewith, (P.), B., 596. manufacture of basic derivatives of anthraquinone. (P.), B., 889.

British Celanese, Ltd., Ellis, G. H., Olpin, H. C., and Kirk, E. W., dyeing, printing, or stencilling of materials made with cellulose derivatives [esters and ethers], (P.), B., 15, 51. manufacture of naphthalene [naphthaquin one] derivatives (P.), B., 935.

British Celanese, Ltd., Ellis, G. H., Olpin, H. C., and Mosby, D. H., coloration of materials comprising cellulose derivatives [with anthraquinone azo-dyes], (P.), B., 678.

British Celanese, Ltd., Ellis, G. II., Olpin, H. C., and Walker,

E. E., treatment of [pile] fabrics, (P.), B., 202.

dycing of cellulose derivatives [with ice colours], (P.), B., 678. British Celanese, Ltd., and Green, S. J., manufacture of aliphatic [acetic] acid anhydrides, (P.), B., 671.
British Celanese, Ltd., Green, S. J., and Widdowson, R. R., manu-

facture of aliphatic acid [acotic] anhydrides, (P.), B., 635, 708. British Celanese, Ltd., Hall, J., Olpin, H. C., Reeves, G., and Kirk, E. W., manufacture of basic derivatives of anthraquinone [amination and alkylamination of hydroxylated anthraquinones], (P.), B., 748.

British Celanese, Ltd., and Kinsella, E., [pumping] apparatus for uso in manufacture of artificial silk or other operations in which liquids are supplied under pressure, (P.), B., 470, 555. apparatus for use in manufacture of artificial filaments, films,

ētc., (P.), B., 678.

British Celanese, Ltd., and Oxley, H. F., production of oxygenated organic compounds [acetic acid from methyl alcohol and

carbon monoxide], (P.), B., 887.
British Celanese, Ltd., Payne, R. W., and Roberts, R. P., manufacture of artificial threads or filaments from celluloso esters or ethers by the dry-spinning or evaporative method, (P.), B.,

British Celanese, Ltd., and Rivat, G., treatment of fabrics; [effects on mixtures of cellulose esters and animal fibres], (P.), B., 976. British Celanese, Ltd., and Rooney, J. H., production of compound materials containing sheets of celluloso derivative, (P.), B., 1011.

British Copper Manufacturers, Ltd. See Hill, T.

British Cyanides Co., Ltd., and Rossiter, E. C., manufacture of artificial resins, etc., (P.), B., 728. British Drug Houses, Ltd. See Pope, W. J.

British Dyestuffs Corporation, Ltd., Adams, H., and Shepherdson, A., manufacture of dye preparations, (P.), B., 124.

British Dyestuffs Corporation, Ltd., Baddiley, J., and Chapman, E., detergent, cleansing, and polishing compositions, (P.), B., 364.

wetting-out agents or emulsifiers for use in textile and other industries, B., 639.

British Dyestuffs Corporation, Ltd., Linch, F. W., and Rodd, E. H., preparation of triarylmethane dyes, (P.), B., 165.

British Dyestuffs Corporation, Ltd., and Shepherdson, A., manufacture of anthraquinone derivatives, (P.), B., 590.

British Dyestuffs Corporation, Ltd. See also Baddiley, J., Hail-

wood, A.J., and Horsfall, R.S.British Glues & Chemicals, Ltd., and Drew, R. B., manufacture of gluo, gelatin, etc. in the form of globules or pellets, (P.), B.,

British Hard Rubber Co., Ltd., and Wells, P. E., ebonite and tho treatment thereof, more particularly ebenite sheets for wireless apparatus, (P.), B., 221.

British Hartford-Fairmont Syndicate, Ltd., and Wardley, T., skimmer blocks for forehearths of glass-melting furnaces or other apparatus containing molten glass, (P.), B., 897. forehearths of glass-melting furnaces, (P.), B., 980.

British India Corporation, Ltd. See Peace, G. British Launderers' Research Association, Parker, R. G., Jackman, D. N., and Hampson, R. E. V., washing, bleaching machines, etc., (P.), B., 977.

British Maximum, Ltd., purification [filtering] of [light] metals, (P.), B., 215.

British Rotary Filter Co., Ltd., and Joyce, A. G. E., rotary filters,

(P.), B., 543. British Thomson-Houston Co., Ltd., and Barringer, L. E., manu-

facture of abradant material, (P.), B., 56. British Thomson-Houston Co., Ltd., and Conlin, J. J., purification of alkali or alkaline-earth metals and production of alloys,

(P.), B., 725. British Thomson-Houston Co., Ltd., Fagan, J. T., and Phelps.

R. G., apparatus for colouring [inside of] glass [bulbs], (P.), B., 777.

British Thomson-Houston Co., Ltd., and Gilson, E. G., manufacture of X-ray anodes, (P.), B., 902.

hard metal composition [tungsten-cobalt alloy], (P.), B., 1019. British Thomson-Houston Co., Ltd., and Heisler, C. L., refrigerator evaporators, (P.), B., 344. refrigerating machines, (P.), B., 1002.

British Thomson-Houston Co., Ltd., and Hull, A. W., electric discharge device, (P.), B., 291. gaseous glow lamps, (P.), B., 783.

chromium-plated tools, (P.), B., 216.

British Thomson-Houston Co., Ltd., and Knudson, A., treating foods and products thereof [by irradiation], (P.), B., 834. British Thomson-Houston Co., Ltd., and Nerad, A. J., mercury

British Thomson-Houston Co., Ltd., and Hollnagel, H. P., shaping

boilers, (P.), B., 495.

of silica, (P.), B., 20.

apparatus for generating mercury vapour or other vapour having a low heat conductivity, (P.), B., 781.

British Thomson-Houston Co., Ltd., and Niedergesass, B. F., production of clear, vitreous silica, (P.), B., 645.

British Thomson-Houston Co., Ltd., and Nordlander, B. W., vulcanisation of rubber, (P.), B., 612.

British Thomson-Houston Co., Ltd., and Pipkin, M., colouring glassware [for electric lamp bulbs], (P.), B., 1016.

British Thomson-Houston Co., Ltd., and Prindle, R. B., [seal for heater-leads of electric furnaces, (P.), B., 177.
British Thomson-Houston Co., Ltd., and Rohlfs, II. C., celluloso

[-artificial] resin product, (P.), B., 1023.

British Thomson-Houston Co., Ltd., Shaw, G. R., and Tellkamp, B. F., treatment of filaments for vacuum tubes, etc., (P.), B., 62.

British Thomson-Houston Co., Ltd., and Smith, A. R., furnace regulation, (P.), B., 154.

apparatus for condensing mercury or other vapour and vaporising water or other liquid, (P.), B., 665.

British Thomson-Houston Co., Ltd., and Steenstrup, C., refrigerat-

ing machines, (P.), B., 193, 665.

British Thomson-Houston Co., Ltd., and Thompson, H. C., electron-discharge apparatus, (P.), B., 688.

British Thomson-Houston Co., Ltd., Ward, A. T., and Bray, G. R. R., coating of surfaces, (P.), B., 1023.

British Thomson-Houston Co., Ltd., Warren, H. W. H., and Green, R. G., [terminals for] electric heating devices, (P.), B., 362. British Thomson-Houston Co., Ltd., Warren, H. W. H., Martin,

R. I., and Smith. A. E., insulating material, (P.), B., 26. British Thomson-Houston Co., Ltd., Warren, H. W. H., and

Newbound, R., friction material, particularly for use for brake liners, (P.), B., 40.

lacquers or varnishes, (P.), B., 365.

British Thomson-Houston Co., Ltd., Warren, H. W. H., Newbound, R., and Ward, A. T., [synthetic] resinous compounds, (P.), B., 484.

British Thomson-Houston Co., Ltd., Warren, H. W. H., and Ward, A. T., lacquers or enamels; insulating enamels, varnishes, or like coatings, (P.), B., 255.
British Thomson-Houston Co., Ltd., and Watson, H. L., manu-

facture of moulded products [for use as electrical insulators], (P.), B., 219.

cellular silica product and method of fabrication, (P.), B., 324. British United Shoe Machinery Co., Ltd., Ricks, F., and Lineham, R. A., adhesives for use in shoe-making, (P.), B., 258.
British Vegetable Parchment Mills, Ltd. See Harrison, W.

Brittain, C. L., chart for the estimation of equivalent cures [conditions of vulcanisation of rubber], B., 484.

Britton, E. C., and Dow Chemical Co., purification of  $\beta$ -phenylcthyl alcohol, (P.), B., 589.

manufacture of ethylene glycol, (P.), B., 888. Britton, G. T., vapour tensions and vapour densities of ethylene

and nitrous oxide, A., 1226. Britton, J. W. See Hale, W. J. Britton, S. A. See Gandrud, B. W.

Britton, S. W. See Geiling, E. M. K. Britzke, E. V., and Dragunov, S. S., precipitation of phosphoric

acid with lime water, B., 918.

Broad, W. R., Lovatt, A. E., and Petrie, G. G. (Cromlech Tile Co.), kiln box or support for firing bull-nose and other curved glazed tiles in the oven or kiln, (P.), B., 645.

Broadbent, B. L. See Broadbent & Sons, Ltd., T.

Broadbent & Sons, Ltd., T., and Broadbent, B. L., centrifugal machines, (P.), B., 343.

Broadbent & Sons, Ltd., T., and Hallitt, W., [impact] pulverisers, (P.), B., 497.

Broadhead, R. W., and Broadhead Constructions, Ltd., gas purifiers, scrubbers, etc., (P.), B., 160.
Broadhead Constructions, Ltd. See Broadhead, R. W.

Broadhurst, F. S., rotary heat exchanger, (P.), B., 77.

Broadhurst & Co., Ltd., and Dexter, W. J., [embossed] rubber goods and their manufacture, (P.), B., 295.

Broadley, J. R., machines for grinding ores, minerals, stones, etc., (P.), B., 965.

Broander, N. E. See Billner, K. P.

Broch, E., form of the lattice of some monoclinic compounds of the magnesium tungstate type, A., 245.

Broch, E., Ottedal, I., and Pabst, A., new determination of the lattice constants of KF, CsCl, and BaF<sub>2</sub>, A., 749.

Broch, E. See also Goldschmidt, V. M. Brocke, A. See Kaufmann, H. P.

Brocklebank, A. P., and Foster Wheeler Corporation, heat exchanger, (P.), B., 77.

Brockman, F. G., determination of mercuric iodide by iodate

reactions, B., 909.

Brockmann, H. Sec Abderhalden, E.

Brode, J. See Grasselli Dyestuff Corporation.

Brode, R. B., absorption coefficient for slow electrons in mercury vapour, A., 1123.

absorption coefficient for slow electrons in alkali metal vapours, A., 1211.

Brode, W. R., spectral absorption of monoazo-dyes. I. Effect

of position isomerism on the spectral absorption of methyl derivatives of benzeneazophenol, A., 490.
absorption spectra and composition of azo-dyes. I. Effect of

position isomerism on absorption of methyl derivatives of benzeneazophenol, A., 694.

Brodersen, K. See I. G. Farbenind. A.-G.

Broderson, H. J., and Standard Oil Co., refining of hydrocarbon oils, (P.), B., 588.

Brodovitsch, K. I. See Adadurov, I. E.

Brodovski, A. von, colloids in molasses, B., 1026.

Brodsky, A. E., potential difference: metal-solution, A., 1391. Brodsky, A. E., and Alferoy, M. I., solubility of benzoquinhydrone in aqueous alcohol, A., 1302.

Brodsky, A. E., and Trachtenberg, F. I., quinhydrone electrode, A., 1240.

**Brodsky**, G., use of nickel in grey iron castings, B., 559.

Brodsky, G., dee of interer in grey from castings, B., 509.

Brody, E., electric polarisation in insulators, A., 491.

Bronsted, J. N., acidity and ionic potentials, A., 1240.

Brönsted, J. N., and Hevesy, G. von, separation of isotopes, A., 484.

Brönsted, J. N., Kilpatrick, (Miss) Mary, and Kilpatrick, Martin, jun., kinetic studies on ethylene oxides, A., 516.

Brönsted, J. N., and Richards, W. T., determination of reaction affinity in systems of solid salts, A., 129.

Brönsted, J. N., and Wynne-Jones, W. F. K., acid catalysis in hydrolytic reactions, A., 273.

Broeze, J. R., action of ptyalin on starch. I., A., 470.

Brogan, F. See Bacharach, G.
Brogden, E. M., Trowbridge, M. L., and Brogden Co., preparation of fresh fruit for market, (P.), B., 226.

Brogden Co. See Brogden, E. M.
Bromwich, T. J. I., phenomena of projected electrons, A., 484. Broniewski, W., and Hackiewicz, B., structure of copper-tin alloys, B., 327.

Bronn, J., separation and utilisation of the constituents of coke-

oven gas, B., 766.

Bronn, J. I., manufacture of chromite-containing refractory material, (P.), B., 247. [fuel for] airship, (P.), B., 971.

Bronn, J. I., Fischer, G., and Concordia-Bergbau Akt.-Ges., manufacture of nitrates, (P.), B., 433.

Bronn, J. I. See also Concordia-Bergbau A.-G.
Bronstein, K. See Burkser, E.
Brook, G. B., and Stott, G. H., testing of electrodeposits on aluminium, B., 286.

Brooklyn Scientific Products Co., Inc. See Lipschutz, E. W. Brooks, J., preparation of a lead sulphide hydrosol and its combination with phosphate ions, A., 20. Brooks, J., and Jowett, M., supposed effect of tumour extracts

on glycolysis, A., 92.
Brophy, G. R. See Hegel, G. W.
Brose, H. L. See Bannon, J.

Broughall, L. St. C., electrolytic preparation or purification of metals [beryllium, tungsten, tantalum, or molybdenum], (P.), В., 1020.

Brongher, J. C., irradiated ergosterol in parathyroid tetany, A., 93.

coagulation of the blood in parathyroid tetany, A., 210.

Broughton, F. L., and Hadlington, D., gas producers, (P.), B., 505, 547.

Brouse, D., consistency of animal glue, B., 368.

Brouse, D. Sec also Browne, F. L., and Truax, T. R.

Brouwer. See Freckmann.

Brown, A. See Courtney, A. M.

Brown, A. L., and Westinghouse Electric & Manufacturing Co., treatment of fibrous material [with synthetic resins], (P.), B., 595.

Brown, A. R., and Yeats, J. I., rotary concentrator for ores, etc., (P.), B., 328.

Brown, B. K., and Burgess Laboratories, Inc., C. F., battery depolariscr, (P.), B., 902\*.

Brown, C. McC., [manufacture of] ammonium alum, (P.), B., 516.

Brown, C. R., and Nelson, H. E., manufacture of starch and glucose, (P.), B., 69.

manufacture of corn sugar, (P.), B., 69. Brown, D. D., effect of different proportions of calcium nitrate and potassium dihydrogen phosphate on the growth of wheat in sand cultures, B., 143.

Brown, E., and Fleischmann Co., cooling and drying of materials

[yeast], (P.), B., 186.

Brown, E. H. See Kraus, C. A.

Brown, F. E. See Gilman, H.

Brown, F. M., enzymes and bacteria in the honey bee, A.,

Brown, F. W., and Austin, G. R., production of dolomite cement, (P.), B., 21.

Brown, G. G. See Carr, M. S., Coats, H. B., De Witt, C. C., and Podbielnick, W.J.Brown, G.H. See Clare, R.L.

Brown, H., and Kolmer, J. A., relation of arsenicals to the glutathione content of animal tissues, A., 720.

Brown, H., and Ramsdell, S. G., blood-calcium distribution in anaphylaxis in the guinea-pig, A., 1195. Brown, H. G., and D.P. Battery Co., Ltd., [construction of Faure-

type] electric accumulator [positive] plates, (P.), B., 946.

Brown, J. B., highly unsaturated fatty acid of liver-lipins; preparation of arachidonic acid, A., 208.

modified Pauly receiver, A., 1162.

arachidonic acid in lipins of thyroid, adrenal, and spleen, A.,

a new highly unsaturated fatty acid in the lipins of the brain, A., 1329.

Brown, J. H. See Simon-Carves, Ltd.

Brown, K. R., and Atlas Powder Co., gelatinised explosive composition, (P.), B., 38.

Brown, M. J., and Pacific R. & H. Chemical Corporation, pro-

duction of hydrocyanic acid, (P.), B., 393.

Brown, O. B., Parker, H., and Brown Co., dryer, (P.), B., 307. Brown, O. R., yeast food [for bread-making], (P.), B., 574. Brown, O. W. See Bradt, W. E.

Brown, R. B., mixing apparatus, (P.), B., 2. Brown, R. B. See also Wilkinson, S. W.

Brown, R. C., Jaeger's method as applied to the determination of the surface tension of mercury, A., 24.

Brown, R. E. See Gilman, H. Brown, R. H. See Aborn, R. H.

Brown, R. J., elimination of colloidal matter [from beet juices],

Brown, R. J., and Dahlberg, H. W., inversion of sucrose in beethouse syrups, B., 411.

Brown, R. J., Sharp, J. E., and Dahlberg, H. W., determination of solubility of sucrose in beet-house syrups, B., 33.

Brown, R.J. See also Shafor, R.W. Brown, R.L., indene and styrene; crude materials in industrial

quantities, B., 6.

Brown, R. L., and Galloway, A. E., methyl alcohol from hydrogen and carbon monoxide. II. Dimethyl ether, B., 426.

Brown, R. L., and Pollock, R. N., composition of tar from lowtemperature carbonisation of Utah coal. II. Heavy portions, B., 344.

Brown, S. M. See Kelley, W. P. Brown, W. F., Hebden, J. C., and Withrow, J. R., preparation of aminonaphthols, A., 924.

Brown, W.G. See Thorvaldson, T. Brown, W.G. and Howard, M., calcium and inorganic phosphorus in the blood of rabbits. IV. Influence of light environment on normal rabbits, A., 714.

Brown, W. L. See Emeléus, K. G.

Brown Co., and Schur, M. O., refining of pulp, (P.), B., 1043. Brown Co., Schur, M. O., and Rasch, R. H., processing of cellulose

fibre, (P.), B., 1043.

Brown Co. See also Arsdel, W. B. van, Brown, O. B., Richter, G. A., Sherman, J. C., and Vannah, H. P.

Brown & Son (Alembic Works), Ltd. See Sand, H. J. S.

Brown, Boverie & Co. See Akt.-Ges. Brown, Boverie & Co. Brown & Makins, Ltd. See Makins,  $W.\ B.$ 

Browne, C. A., verification of the 100° point of the Ventzke sugar scale; introduction, B., 336.

spontaneous decomposition of sugar-cane molasses, B., 617.

spontaneous combustion of hay, B., 1048.

Browne, C. A. See also Greenleaf, C. A., and Nelson, E. K. Browne, E. H. S., and Sargint, A. M., cementitious material, (P.), B., 396.

Browne, F. L., and Brouse, D., nature of adhesion between glue and wood, B., 257.

consistency of casein glue, B., 406.

Browne, F. L. See also Hrubesky, C. E., and Truax, T. R. Browne, V. B., preparation of low-carbon [iron-chromium] alloys, (P.), B., 523.

rendering iron-chromium-aluminium alloys ductile, (P.), B.,

Brownie Corporation. See Andress, F. J.

Browning, C.H., Cohen, J.B., Ellingworth, S., and Gulbransen, R., trypanocidal action of some derivatives of anil- and styrylquinoline, A., 1109.

Browning, R. G., whiting and [discoloration of] linseed oil, B., 861.

Brozek, E. See Zinke, A.

Bruce, H. D., tinting strength of pigments, B., 64. Bruce, J. A. Seo Easterfield, T. H.

Bruce MacBeth Engine Co. See Bassett, A. J.

Bruch, E. Sce Wedekind, E. Bruchhans, E. See Krauss, F.

Bruehhausen, F. von, and Bersch, H. W., constitution of cantharidin; decomposition reaction of cantharidin, A., 192.

Bruckl, K. See Gossner, B. Bruckner, V. See Schönberg, A. Bruckner, Z. See Zemplén, G.

Brüche, E., effective cross-section and molecular structure, A., 123.

effective cross-section and molecular structure for the isosteric series:  $N_2$ -(CH)<sub>2</sub> and  $O_2$ -[(NH)<sub>2</sub>]-(CH<sub>2</sub>)<sub>2</sub>, A., 1211.

Brüche, E., and Littwin, W., analogous properties and analogous radiometer curves of nitrogen and carbon monoxide, and of carbon dioxide and nitrous oxide, A., 250. radiometer question, A., 251.

Brück, H., derivation of grating forces, grating energies, ionic dimensions, and compressibilities of simple salts by wave mechanics, A., 381.

Brück, H. See also Schüler, H. Brückl, K. See Gossner, B.

Brückner, H., hydrolysis of phenolsulphonie acids and purification of phenols by separation of their sulphonic acids, B., 47. Brüda, B. E., blood anti-coagulant in peptone, A., 845.

Brühl, H., action of caffeine on membranes and proteins, A., 1336.

Brüll, L. See Bonino, G. B.

Brüll, W., connexion between the different hydrates of a salt, A., 1237.

Bruere, dyeing without colouring matters, B., 595.

preservation of manufactured rubber and softening of hardened goods, B., 903.

Bruggen, M. G. van. See Arkel, A. E. van.

Brugger, O. See Lindner, J.

Bruhat, B., and Pauthenier, M., electrostriction in non-conducting liquids, A., 1134.

Bruhat, G., adiabatics of a mixture of liquid and vapour, A., 883. Bruhn, H. O., [rubber] mucilage for uniting bodies or pieces of material of the same or of different kinds, (P.). B., 405.

Bruhns, G., determination of hardness in water by means of soap solution, B., 662.

Bruins, P. F., difurylethylene, A., 703.

Brukl, A., quantitative analysis of gallium. III., A., 1260. Brukl, A. See also Moser, L.

Brumshagen, W. See Kroepelin, H. Brundage, D. K. See Thompson, L. R. Brunc, E. H., treatment of garbage, (P.), B., 266.

Brunel, A. See Fosse, R.

Brunetti, R., paramagnetism through ions subjected to molecular forces, A., 982.

absorption spectrum of praseodymium compounds in various term and aggregation conditions, A., 1126.

Bruni, G., and Natta, G., crystalline form of thiophen and its solid solutions with benzene, A., 1223.

Brunius, E. See Euler, H. von.

Brunler, O., apparatus for heating by submerged flames, (P.), B., 87.

Brunn, J. H., laboratory rectifying columns with non-siphoning bubbling-cap plates, A., 1416. Brunn, J. H. See also Washburn, E.

Brunner, A. See Ebel, F

Brunner, E., oxidation of cobaltous sulphate and potassium cobaltous oxalate with ozone, A., 283.

Brunner, E. See also Fichter, F. Brunner, G. See Kailan, A. Brunner, K., and Moser, H., formation of 1-phenyl-5-methyl-3pyrazolone, A., 1462.

Brunner, M., retardation period in spontaneous ignitions and explosions, A., 515.

Brunner, M. See also Standinger, H.

Brunner, O., amyrins. I. Dehydrogenation of amyrin, A., 71. Brunner, R. See Ebel, F.

Brunnträger, F. See I. G. Farbenind. A.-G., and Kränzlein, G. Brunovski, B. K. See Schubnikov, A. V.

Bruns, B., and Frumkin, A., relationship between gas content and adsorption of electrolytes by activated charcoal. I., A.,

Bruns, T. See Hernler, F.

Brunschwig, R., and Jacqué, L., testing of motor spirit, B., 931.

Brunswig, H., nature of nitrocellulose, B., 151.

Brus, G., and Peyresblauques, G., nopinene ozonide, A., 72. Bruson, H. A., See Goodyear Tire & Rubber Co., and Stau-

dinger, H. Brustier, V., and Bugnard, L., spectrographic examination of lipins, A., 960.

Bruylants, P., esters of butenoic acids, A., 792.

Bruzau, M., spatial distribution of the γ-radiation of radium in

slightly dispersive media, A., 370. Bružs, B., rate of decomposition of solids. V. Rate of decom-

position of mercurous carbonate and some metal salt hydrates, A., 888.

Bryan, A. B., dielectric constants of argon and neon, A., 1217. Bryans, F., and Pyman, F. L., nitration of benzylpyridines and oxidation of benzylpiperidines, A., 577.

Bryant, J. G., attrition mill, (P.), B., 306.

Bryant, L. R., large metal Soxhlet extractor, A., 1161. Brychta, F. See Dubský, J. V. Brysch, O. P., and Byrne, J. F., organic sulphur content of cokeoven gas from coals of widely varying sulphur content, B.,

Brysilka, Ltd., and Schubert, F. W., preparation or treatment of liquids for use in the manufacture of artificial silk, (P.), B.,

Bryson, F. F. S., distribution of temperatures and block corrosion in glass tank furnaces, B., 815.

Bryson, T. A., and Tolhurst Machine Works, Inc., centrifugal extractor, (P.), B., 543.

Brzák, J. See Balas, F.

Buadze, S. See Abderhalden, E.

Bubblestone Co. See Rice, J. A., and Rickard, E. M. Bnc, H. E., Clough, W. W., and Standard Development Co.,

manufacture of esters [sec.-butyl acetate], (P.), B., 935.

Buc, H. E., and Standard Oil Development Co., driers and their combination with drying oils, (P.), B., 530. manufacture of oil-soluble sulphonates, (P.), B., 636.

purification of alcohols, (P.), B., 886.

Buc, H. E. See also Hopkins, M. B., and Moore, W. Bucciardi, G., action of colloidal sulphur (sulphosol) on the blood-sugar of experimental animals and of man, A., 96.

effect of colloidal sulphur on blood-sugar, A., 1104. Bucek, J., vitamin content of cereals and legumes, A., 1344. Buch, K., solubility of carbon dioxide in water, A., 130.

Buchanan, C. See Patterson, T. S.

Buchanan, G. H., and American Cyanamid Co., manufacture of

diammonium phosphate, (P.), B., 896.

Buchanan, G. H., Barsky, G., and American Cyanamid Co., recovery of oxalates, (P.), B., 517.

Buchanan, G. H., Barsky, G., Ashley, K. D., and American Cyanamid Co., production of salts of carboxylic acids, (P.),

Buchanan, J. H., and American Bottlers of Carbonated Beverages, composition to be used as sterilising and germicidal agent, (P.), B., 456.

Buchanan, J. L. See Toto Co., Ltd.

Bueherer, H., production of new derivatives of [resinous] condensation products of aldehydes and phenols, (P.), B., 219\*

Bucherer, H. T., carrying out chemical reactions, (P.), B., 964. Bucherer, H. T., and Hoffmann, E., action of sulphites on aromatic amino- and hydroxy-compounds. XIII. Action of sulphites on resorcinol (synthesis of m-hydroxyazo-dyes), p-phenylenediamine and its derivatives, A., 554.

Buchholz, B., iodine content of human organs, A., 1098.

Buchholz, B. See also Sturm, A. Buchholz, M., preventing explosive gas mixtures from being formed in the casings of electrical apparatus enclosed in an insulating medium, (P.), B., 401.

Buchmann, E., liberation of secondary electrons by electrons of 1-30 kilovolts, A., 5.

Buchner, E. H., behaviour of swollen gelatin in water vapour, A., 1235.

Buchner, H., anomaly in the diamagnetism of gases, A., 249. Buchner, M., dissolving and purifying materials containing alumina, applicable also to other ores, (P.), B., 207.

complex hydrofluoric acids, (P.), B., 393.

production of alumina from clay and other aluminiferous material, (P.), B., 517

Buchner, M., and Meyerhofer, A. F., manufacture of pure hydrofluoric acid from polluted fluorspars, (P.), B., 644\*. decomposition of complex hydrofluoric salts, (P.), B., 978\*.

Buchtala, J., distribution of mercury in the various organs in cases of mercurial poisoning, A., 1487.

Buchwald, K. See Mattick, W. L.

Buchwald, K. W. See Reinhard, M. C., and Riegel, E. R.

Buck, J. S., and Jenkins, S. S., catalytic reduction of  $a\beta$ -diketones and their derivatives, A., 1072

Buck, L., and Hunter Machine Co., J., drying apparatus, (P.), B., 419.

Buckbee, J. C., centrifugal separator, (P.), B., 839. Buckland, H. See Hoyle, J. C.

Buckley, O. E., and Western Electric Co., Inc., magnetic alloy, (P.), B., 561.

Buckley,  $\dot{P}$ . S., and Hartley, (Sir) H., standard electrode potentials in methyl alcohol, A., 1240.

Bucknall, E. H. See Hudson, O. F

Buckner, G. D., and Martin, J. Holmes, hydrogen-ion concentration of the reproductive organs of the white Leghorn chicken. A., 955.

Bucy, P. C. See Van Dyke, H. B.

Budd Manufacturing Co., E. G., and Smidth, L., urea-formaldehyde condensates, (P.), B., 1047.

Budde, O., physiology of digestion in infants. VI. Effect of B. coli fermontation on erepsin and trypsin. VII. Excretion of tryptase and peptidase in the fæces of infants, A., 1491.

Buddeus, W., reduction of ores, (P.), B., 1020\*. Budgen, N. F., pinholes in cast aluminium alloys, B., 820. Budil, E., air filters for separating dust from dust-laden air, (P.), B., 3.

Budnikov, P. P., obtaining raw clays which are not washed away

by water, B., 518. Budnikov, P. P., Schicharevitsch, S. A., and Schachnovitsch, L. G., liquefaction of difficultly workable fireclays, (P.), B., 941.

Budowski, I. See Chem. Fabr. Jacobus Ges.m.b.H.

Budtz, O. J., apparatus for mixing or emulsifying especially viscous or adhering liquids, (P.), B., 498.

Bueb, W. See Dessauer Vertikal-Ofen Ges.m.b.H.

Bücher, C., rendering iron pipes immune from attack by water and apparatus therefor, (P.), B., 649\*.

Büchner, E. H., Katz, J. R., and Samwel, P. J. P., unimolecular films of cyclic ketones, A., 1378.

Bühl, A., effect of gases on the electrical double layer of aqueous solutions, A., 144.

Bühler Gebrüder, disintegrators, (P.), B., 458.

Buehrer, T. F., and Mason, C. M., cupric oxide as a standard in iodometry, A., 669.

Bührig, W. H. F., and Fleischmann Co., manufacture of yeast, (P.), B., 994\*.

Bümming, G., and Ferrein, K., determination of [bismuth in] bismuth hydroxy-iodide, B., 355.

Bünning, E. See Stern, K.

Bürg, G., working-up materials containing precious metals, (P.), B., 945.

Bürger, M., and Oeter, H. D., cholesterol content of the human intestinal wall, A., 839.

cholesterol content of mucous membrane of human large intestine, A., 1328.

Bürger, M., and Schlomka, G., ageing of tissue, A., 1101.

Bürger, M., and Wintersteel, W., distribution of sterols in the fæces of man on a mixed diet, A., 592.

Bürstenbinder, R., theory and practice of tung oil [gelation], B.,

Büsching, W., denitration of waste sulphuric acid mixtures, (P.), B., 75,

Büssem, W., and Herrmann, K., X-ray studies of the univalent metal perchlorates, A., 124

Büttner,  $\hat{G}$ ., and Miermeister, A., evaluation of wine distillates and wine brandies, B., 373.

Büttner-Werke Akt.-Ges., and Zikesch, H., burner for coal-dust firing, (P.), B., 509.

Butano, M., and Masini, A., influence of ergotamine on the bloodsugar of animals and man, A., 349.

Buffalo Forge Co. See Carrier, W. H.

Buffalo Foundry & Machine Co. See Miles, H. D. Bugbird, H. C., preparation of explosives, (P.), B., 539. Bugnard, L. See Brustier, V.

Buhariwalla, N. A. See Dastur, R. H.

Buhr. See Friederich. Buice, W. A. See Ellison, G.

Buining, J. See Backer, H. J.

Buisson,  $H_{\cdot}$ , measurements of ozone in the higher atmosphere in 1928, A., 419.

Bulger, H. A., Allen, D., and Harrison, L. B., chemical mechanism of hydrochloric acid secretion. II. Blood passing through the stomach of dogs, A., 91.

Bulger, H. A., Stroud, C. M., and Heideman, M. L., chemical mechanism of hydrochloric acid secretion. I. Electrolyte variations in human gastric juice, A., 91.

Buliř, J., refractometric determination of formic acid in the presence of acetic acid, A., 423.

Bull, H., treatment of fatty materials, (P.), B., 689. Bull, H. B., electrostatics of flotation, B., 521. Bull, H. B. See also Taylor, N. W.

Bull, H. I., and Garner, W. E., heat of adsorption of oxygen and nitric oxide on charcoal, A., 1139.

Bullard, R. H., series arrangement of organic groups. I. As determined by halogenation of mixed stannancs, A., 1473.

Bullard, R. H., and Vingee, R. A., derivatives of trimethylethylstannane, A., 546.

Bullen, F.J. See Chopra, N.D. Bulliard, H. See Giroud, A.

Bulmer, J. W., manufacture of cellulose acetate, (P.), B., 126, 429\*, 513.

Bumm, E. See Kraut, H. Bunce, E. H. See Breyer, F. G.

Bunet, P. E., and Aciéries de Gennevilliers, magnetic-core induction furnaces, (P.), B., 823.

Bunge, C., separation of the acid constituents from low-temperature tar or its fractions, (P.), B., 347. Bunge, F. C., separation of the neutral constituents from low-

temperature tar and its fractions, (P.), B., 46.

Bunge, F. C., and Macura, H., working-up low-temperature tar, (P.), B., 46.

Bunge, F. C. See also Pistorius, A. Bunker, S. W. See Oilseeds Baling Co., Ltd. Bunt, C. van de, trichloro- and tetrabromo-nitrobenzaldehydes, hexachloro- and octabromo-indigotins, A., 315.

Bunte, K., causes of and means of reducing the water content of tar, B., 157.

determination of melting processes in ash [from coal], B., 914. Bunte, K., and Reerink, W., melting of fuel ash, B., 914.

Buntin, A. See Dumanski, A. V.

Buogo, G. See Ricevuto, A. Burak, M. See Herrmann, K.

Burbank, W. S. See Butler, B. S.

Burch, C. R., vacuum distillation, A., 533. Burch, C. R., Bancroft, F. E., and Associated Electrical Industries, Ltd., vacuum distillation, (P.), B., 702.

Burch, C. R., Bancroft, F. E., and Metropolitan-Vickers Electrical Co., Ltd., vacuum distillation, (P.), B., 269.

Burch, W. J. N. See Plimmer, R. H. A.

Burckhardt, E., Müller, Fritz, Rothlin, E., and Chemische Fabrik vorm. Sandoz, derivatives of cinchona alkaloids, (P.), B., 303\*. Burdick, E. C., and Dow Chemical Co., surface treatment of light metals, (P.), B., 725.

manufacture of magnesium alloy, (P.), B., 822.

Burdin, J. See Dorn, C. Burditt, A. K., and Schaphorst, W. F., mechanical handling of materials in and about the chemical plant. I., II., and III., B., 541, 927.

Bures, E., and Bergauer, J., cyclamin, A., 1306.

Bures, E., Bergauer, J., and Kracik, A., phthalcin-metal com-

pounds, A., 1310.
Bureš, E., and Kracik, A., oil of Hyoscyamus niger, B., 825.

Bureš, E., and Mládkova, H., oil of Nigella sativa, B., 825. Bureš, E., and Nedšlková, M., bromination of p-anisidine and p-acetanisidide, and nitration of 3:5-dibromo-p-acetanisidide and some of its derivatives, A., 1437.

Bureš, E., and Rubeš, T., 3:5:6-trichloro-2-amino-p-xylene and

some derivatives, A., 1057.

Bureš, E., and Šatek, J., oil of Cydonia vulgaris, B., 825.

Bureš, E., and Souček, M., substitution in the benzene ring; 3:4-dibromo-o-anisidine and some of its derivatives, A., 1062.

Bures, E., and Susterova, B., oil of pieony, B., 825. Burford, W. A., preparation of the surfaces of iron, steel, and copper articles for nickel-plating, (P.), B., 176.

Burge, W. E., and Verda, D. J., effect of alcohol and of anæsthetics on sugar utilisation, A., 96.

Burge, W. E. See also Seager, L. D.

Burgeni, A., and Kratky, O., X-ray observations on cellulose. V. Lattice of cellulose hydrate, A., 1132.

Burger, D., intensity measurements in the helium spectrum, A., 732.

Burger, G., determination of alkalis in minerals by the interferometer, A., 1411.

Burger, G. See also Mayr, C. Burger, H. C., and Cittert, P. H. van, broadening of spectral lines by self-absorption, A., 113.

Burger, H. C. See also Ornstein, L. S.

Burger, M. See Moldenhauer, W.
Burgers, W. G., and Basart, J. C. M., recrystallisation of single aluminium crystals. I. The orientation of crystals produced

by cold turning, the deformation being small, A., 384. recrystallisation of single aluminium crystals. II. Orientation of the crystals formed by recrystallisation under strong deformation, A., 631.

Burgess, A. H., drying of hops; Institute of Brewing Research Scheme; report of the seventh season's work at the experi-

mental oast, 1927, B., 533.
Burgess, A. M. See Matthews, I. C.
Burgess, H. See Morgan, G. T.

Burgess, L. L. See Freundlich, H.
Burgess, M. J., and Wheeler, R. V., ignition of firedamp by the heat of impact of rocks, B., 41.

ignition of firedamp by the heat of impact of metal against rock, B., 841.

Burgess, P. S., alkali soil studies and methods of reclamation, B., 105.

Burgess,  $P. S_{-}$ , and Pohlman, G. G., citrus chlorosis as affected by irrigation and fertiliser treatments, B., 409.

Burgess, P. S. See also Magistad, O. C. Burgess, W. M., and Rose, A., reducing action of metals on salts in liquid ammonia solution; action of sodium on zinc eyanide, A., Îl54.

Burgess Laboratories, Inc., C. F. See Brown, B. K.

Burghard, E., and Paffrath, H., glycogen content of the liver. I. Determination of the glycogen and carbohydrate content of the liver, A., 715.

Burk, D., free energy of glycogen-lactic acid breakdown in muscle, A., 211.

Burk, D. See also Meyerhof, O.

Burkard, J. See Sonu, A.
Burke, C. E. See Nobel Industries, Ltd.

Burke, D. J. See Schidrowitz, P.

Burke, G. W., the oxygen consumed determination [in water

analysis], B., 76.
Burke, S. P., and Plummer, W. B., gas flow through packed columns, B., 1.

suspension of macroscopic particles in a turbulent gas stream,

Burke, W. E., De Ropp, H., and American Potash & Chemical Corporation, concentration of brine, (P.), B., 642.

Burke, W. E. See also Amer. Potash & Chem. Corp.

Burkhardt, A. See Grube, G. Burkhardt, G. N., and Wood, H., nitroarylsulphuric acids and their reduction products, A., 311.

Burkhardt, O., Fischer, A., and Frank, F., apparatus for technical gas analysis, B., 542.

Burkhardt, R., formation of cupriferous "black earths," Niari, French Congo, A., 788, 1036.

Burkinshaw, W. See Knowles, H. S.

Burkser, E., Schapiro, M., and Bronstein, K., radioactivity of the coals and anthracites of the Donetz coal basin, A., 1264. radium content of some foodstuffs, A., 1335.

Burn, J. F., and Lancaster, J., [concrete] mixing machines, (P.), B., 97.

Burn, J. H., oxytocin and vasopressin; examination of separated principles of pituitary (posterior lobe) extract, A., 725. Burn, J.H., and Ling, H.W., effect of pituitary extract and adren-

aline on ketonuria and liver-glycogen, A., 725. Burn, J. H. See also Bijlsma, U. G., and Trevau, J. W. Burneleit, W. See Meerwein, H.

Burnett, J. McD. See Haddon, W.

Burnham, G. B., and Burnham Chemical Co., crystallisation of salts from brine, (P.), B., 850.

obtaining sodium chloride, (P.), B., 939.

Burnham Chemical Co. See Burnham, G. B., and Gauger, A. W. Burnot Fireproofing Products, Inc. See Hopkins, N. M.

Burns, C. M., effect of continued ingestion of mineral acid on growth of body and bone and on the composition of bone and soft tissues, A., 1487.

factors influencing bone formation in the albino rat. I. Effect of guanidine intoxication produced by the successive injection of sublethal dose of guanidine salts. II. Effect of injection of parathyroid extract, A., 1487.

Burns, C. St. C., and Kay, F., filter, (P.), B., 79.

Bnrns, H. M., and Wood, J. K., behaviour of cellulose acetate

towards amino-derivatives of anthraquinone, B., 168.

Burns, H. S. See Freeport Sulphur Co. Burns, G. R., photochemical decomposition of lactic acid, A.,

1424. Burns, J., McCombie, H., and Scarborough, H. A., substitution

products of azobenzene, A., 58.

Burns, J. E. See Remington Arms Co., Inc.
Burns, K., Meggers, W. F., and Kiess, C. C., standard solar wavelengths (3592—7148 A.), A., 111.
Burns, R. M., and Campbell, W. E., electrical resistance method of measuring corrosion of lead by acid vapours, B., 560.

Burova, E. I. See Spitalski, E. I. Burow, von. See Goy, A. Burr, A., colostrum of East Friesian milch sheep, A., 953.

milk of East Friesian milch sheep during lactation, B., 620. Hoyberg's method for determining fat in milk and cream, B.,

water content of cheese, B., 621. Burr, G. O., and Burr, M. M., deficiency disease due to exclusion of fat from the diet, A., 853.

Burr, M. M. See Burr, G. O. Burrage, L. J. See Allmand, A. J.

Burrai, J. Sec Padovani, C.

Burrows, G. H. See Lineken, E. E.

Burrows, L. P., process for producing gas, (P.), B., 196.
Burrows, M. T., Jorstad, L. H., and Ernst, E. C., chemical and biological changes induced by X-rays in body tissue, A., 1195. Bursch, L., determination of moisture and oil in soya beans, B., 528.

Burstall, F. H. See Morgan, G. T.

Burstein, R., and Frumkin, A., behaviour of outgassed activated charcoal with electrolytes, A., 640.

relationship between gas content and adsorption of electrolytes by activated charcoal. II., A., 640.

Burstin, H., and Winkler, J., determination of maximum adsorption of activated charcoal, A., 1231.

benzine for precipitation of asphaltenes from mineral oil. I. and II., B., 6, 117. rapid method of determining the maximum adsorption of

benzene by activated charcoal, B., 667.

Burstyn, H., paraffin content of road asphalts, B., 271.

Burt, Boulton & Haywood, Ltd., and China, F. J. E., grinding or crushing machines, (P.), B., 306.

Burtis, W. H., oscillation generator, (P.), B., 252. Burton, A. C., "packing fractions" of the atoms and their interpretation, A., 372.

Burton, C. A. C., floating mercury on water, A., 641.

Burton, D., measurement of the properties of sole leather and the effects of sulphuric acid, B., 613.

Burton, D., and Robertshaw, G. F., limitations of present methods

used in analyses of oils and fats in the leather industry; report of a Committee of the Society of Leather Trades' Chemists. II.,

Burton, E. F., and Deacon, (Mrs.) B. R., effect of temperature on the coagulation of a colloidal solution of copper, A., 1143.

Burton, E. F., and Pitt, A., rapid determination of moisture in wheat, B., 867.
Burton, G. W., determination of vitamins-A, -B, and -C in col-

lards and turnip greens, B., 995.

Burton, H., mobile anion tautomerism. III. Activation of threecarbon anionotropic systems by alkyl and aryl groups, A.,

Burton, H., and Ingold, C. K., existence and stability of free radicals, A., 1052.

modes of addition to conjugated unsaturated systems. II. Reduction of conjugated unsaturated acids by metals dissolving in aqueous media, A., 1270.

Burwell, A. W., and Alox Chemical Corporation, atomisable mobile fuel product, (P.), B., 10.

production of hydrogen of great purity, (P.), B., 171.

exidation of hydrocarbons, (P.), B., 199.

manufacture of organic acids from petroleum hydrocarbons, (P.), B., 199.

production of hydrogen and carbon by thermal decomposition of hydrocarbons, (P.), B., 668.

Bury, C. R. See Grindley, J.

Bus, R., elution and decomposition of synthetic urea in the soil with reference to climatic conditions, B., 787.

Busch, A., and Wülfing, J. A. von, manufacture of albumin pre-

parations [containing silicates], (P.), B., 72. Busch, C. F. E., and Sorensen, V., production of blue pigments, (P.), B., 826.

Busch, F. See Jander, G. Busch, G. See Walden, P

Busch, M., and Schmidt, Walter, catalytic hydrogenation of halogenated organic compounds, A., 1432.

Busch, M., and Schmidt, Walter [with Bohrisch, Paul, and Lusch, O.], new group of hydrazomethylenes, A., 940.

Busch, M., and Schulz, K., catalytic reduction of nitro-compounds, A., 923.

Busch, O., drying system for use with annular kilns, (P.), B., 740.

circular kiln, (P.), B., 851.

Buschmann, F. E. M., manufacture of magnesia insulating materials, B., 252.

Buschmann, H. See Stoermer, R.

Buse, O. H., and Grasselli Chemical Co., mechanical furnace, (P.), B., 154.

Buse, O. H. See also Grasselli Chem. Co.

Busenburg, E. B. Sce Winkelmann, H. A. Buser, H. See Battegay, M.

Bush, (Miss) F., [reaction between] sulphuric and hydriodic acids, A., 664.

Bushnell, L. S. See Freeport Sulphur Co. Busse, W. F., and Daniels, F., chemical effects of cathode rays on oxygen, air, nitric oxide, and carbon dioxide, A., 155.

Bustamante, L. G., influence of insulin and synthalin on the gastric sccretion, A., 1495.

Buston, H. W., isolation of mesaconic acid from cabbage leaves, A., 106.

Buswell, A. M., control of scum in sewage tanks, B., 455. Buswell, A. M. See also Elder, A. L., Neave, S. L., and Symons,

Butcher, R. W., Pentelow, F. T. K., and Woodley, J. W. A., diurnal variation of the gascous constituents of river waters. IV., A., 108.

Butescu, D., determination of carbon and hydrogen in organic substances by the dry method, A., 42. derivatives of 2-methylanthracene obtained by the action of

oxalyl chloride, A., 186.

Butkewitsch, W. S., and Butkewitsch, W. W., reciprocal action of ions in diffusion processes, A., 391.

Butkewitsch, W. S., and Federov, M. V., formation of fumario acid in sugar cultures of Rhizopus nigricans and its behaviour with pyruvic acid, A., 607. conversion of acetic acid by Mucor stolonifer into succinic and

fumaric acids and a method of separation and quantitative determination of these acids, A., 724.

Butkewitsch, W. W., mechanism of plant nutrient intake, B.,

Butkewitsch, W. W. See also Butkewitsch, W. S.

Butkov, K., absorption spectra and the nature of the chemical combination in thallous halides in the vapour state, A., 1362.

Butkov, N. A., detonation of motor fuels, B., 43. capillarity of lubricating oils, B., 43.

insulating oils, B., 119.

cracking, B., 345.
Butkovsky, J. J. See Ray, A. B.

Butler, B. S., and Burbank, W. S., relations of electrode potentials of some elements to the formation of hypogene mineral deposits, A., 905.

Butler, C. L., and Cretcher, L. H., constitution of gum arabic, A., 794.

preparation of allomucic acid and derivatives, A., 1042.

formation of glucosazone, A., 1426.

Butler, H. P., manufacture of liquefied rubber composition, (P.), B., 485\*.

Butler, J., and Walton, I. P., solder for east iron and other metals

for surfacing them, (P.), B., 603. Butler, J. A. V., equilibrium of heterogeneous systems including electrolytes. III. Effect of an electric field on the adsorption of organic molecules, and the interpretation of electrocapillary curves, A., 391.

mutual salting-out of ions, A., 1009.

Butler, L. F. See Ramser, G. B. Butler, L. W., relation between the photo-electric and the photographic effect in silver bromide, A., 277.

Butt, H., and Riley Stoker Corporation, metallurgical furnace, (P.), B., 23.

Buttenberg, P., effect of fumigation by hydrogen cyanide on fresh fruit and vegetables, B., 575.

Butterworth, E., and Elkin, H. A., determination of copper and nitrite in solutions of cuprammonium hydroxide, B., 717.

Butterworth, J., and Walker, T. K., mechanism of the degradation of citric acid by B. pyocyaneus. I., A., 1493.

Buttgenbach, H., [heterobrochantite, neptunite, rock salt, and syngenite], A., 45. Butz, A. See Mannich, C.

Butzler, E. W. See Hall, R. E. Buxton, B. H., and Darbishire, F. V., the  $p_{\rm H}$  of the cell sap of flowers, A., 476.

behaviour of anthocyanins at varying hydrogen-ion concentrations, A., 1310.

Buylla, B. A., and Pertierra, J. M., synthesis of higher hydrocarbons from water-gas, B., 383.

Buzágh, A. von, theory of the solid-phase rule, A., 29.

streaming-double refraction and thixotropy of bentonite suspen-

sions, A., 506. method of investigating coagulation and peptisation phenomena, A., 645.

relations between electrokinetic migration velocity, peptisation, and stability of coarsely disperse systems, A., 763.

cataphoretic migration velocity of zeolite suspensions, A., 1236. Wo. Ostwald's solid-phase rule and the solubility of casein in sodium hydroxide, A., 1380.

Buzagh, A. von. See also Ostwald, Wolfgang.
Byck, H. T., resonance-fluorescence phenomenon in the cyanogen spectrum, A., 1127.

Bye, M., and Merrell Co., W. S., blood coagulant, (P.), B., 302.

Bylinken, J., production of codeine from opium, (P.), B., 538. By-Products Coke Corporation. See Waggoner, C. L.

Byrd, T. L., determination of blood-sugar, A., 207. Byrkit, G. D., and Dehn, W. M., double salts of aniline hydro-

halides with metallic halides, A., 690.

Byrne, B.J.Byrne, J.F.Sec Newitt, D. M. See Brysch, O. P.

Byrnes, C. P. See James, J. H.

Bysov, B. V., ageing of rubber, B., 1023. Bysov, B. V. See also Gosudarstvennyi Trest Rezinovoi Promyshlennosti (Resinotrest).

C.

Cabanac, M., hydrogenation of acetaldehydeacetals, A., 795. Cabannes, J., depolarisation of the secondary radiation in the complex light resulting from the molecular diffusion of monochromatic light, A., 8.

secondary radiations in light diffused by quartz, A., 378. secondary radiations in light diffused by calespar, A., 627. Cabannes, J., and Rocard, Y., electromagnetic theory of Maxwell-

Lorentz and the molecular diffusion of light, A., 752. Cabannes, J., and Salvaire, P., enlargement and displacement of spectral lines by molecular diffusion, A., 489.

Cabell, C. A. See Underwood, J. E.

Cabot Co. See Duerr, W. A.

Cabrera, B., paramagnetism and the structure of combined atoms, A., 628.

Cabrera, B., and Duperier, A., paramagnetic properties of the rare earths, A., 982, 1224\*.

Cactus Rubber Co. of America. See Wichmann, J. C.

Cade, A., and Barral, P., increase in the calcium content of the organs of rabbits on feeding with naphthalene, A., 845. Cade, A. R. See Whitmore, F. C.

Cadenbach, G. Sec Fredenhagen, K.

Cadwell, S. M., and Naugatuck Chemical Co., controlling the vulcanisation of rubber and similar materials, (P.), B., 257\*,

compounding and vulcanisation of rubber and products therefrom, (P.), B., 692.

chemical products [vulcanisation accelerators and anti-oxidants for rubber], (P.), B., 949.

Cadwell,  $S.\ M.$  See also Naugatuck Chem. Co. Cady,  $H.\ P.$ , and Beecher,  $H.\ U.$ , at. wt. of nitrogen occluded in fergusonite, A., 863.

Cady, H. P., and Longsworth, L. G., modification of the movingboundary method for the determination of transference num-

bers, A., 1014. Caglioti, V., isomorphism between hexachloro-salts of pyridine and cerium, thorium, tin, lead, and quadrivalent titanium, A., 125.

polyhalides. I. Chloroiodic acid, HICl4,4H2O, A., 780.

Caglioti, V., and Malossi, L., double sulphates of bismuth with alkali metals. II. Double sulphates of bismuth and ammonium, A., 1408. Caglioti, V. See also Zambonini, F. Cahan, M. H. See Koch, E. M.

Cahn, T., and Bonot, A., change in the condition of equilibrium of cell components. III. and IV., A., 1480.

Cahn, T. See also Aubel, E.

Cain, J. R., and Richardson Co., making metal foils, (P.), B., 290. Caines, C. M., assay of hysocyamus leaves and extract of hyos-cyamus, B.P., (P.), B., 869.

Caire, P. See Balachowsky, D. Caius, J. F., and Wadia, J. H., halogenomercuriphenols, A., 1321. Cajori, F. A., Wright, L. M., and Stilz, E., utilisation and rate of excretion of ingested creatine by normal and arthritic subjects, A., 209.

Calantar, N. See Lottermoser, A.

Calatroni, R., and Tschopp, E., determination of chlorine ions in organic fluids, A., 962.

Calaveras Iron & Steel Co. See Read, F.J.

Calcagno, O., salts of bismuth and sodium phosphate, A., 779. Calco Chemical Co. See Battegay, M., and Crossley, M. L.

Calcott, W. S. See Du Pont de Nemours & Co., E. I. Caldwell, J. H. See Henderson, H. B.

Caldwell, J. S., composition of the juices of some American apples, A., 362.

Caldwell, L., and Celite Co., treatment of liquids [petroleum oils]. (P.), B., 234.

Caldwell, W. E., and Krauskopf, F. C., reduction reactions with calcium hydride. I. Rapid determination of sulphur in insoluble sulphates, A., 1411.

Caldwell, W. T. See Johnson, T. B. Caley, E. R., qualitative reagent for sodium, A., 1031.

graduated wash bottles, A., 1161.

determination of true sodium content of calcium carbonate intended for use in the Lawrence Smith method for alkalis. A., 1412.

Caley, E. R. [with Foulk, C. W.], gravimetric and colorimetric method for the direct determination of sodium, A., 900.

Califano, L., and D'Alise, M., reduction processes in muscle under the action of guanidine, A., 349.

California Cyanide Co., Inc., and Dolley, P. T., production of hydrocyanic acid, (P.), B., 850.

California Fruit Growers' Exchange, manufacture of food products, (P.), B., 492.

[non-hygroscopic] food product, (P.), B., 492. food product and its production, (P.), B., 576.

California Fruit Growers' Exchange. See also Patteson, M. B.California Packing Corporation. See Olivarius, H. de F., and

Prowse, F. J.
Calingaert, G. See Edgar, G.
Callaert, T. See Schilling, A.

Callan, T., and Horrobin, S., simplified methods of potentiometric and conductometric analysis and their industrial application, B., 154.

Callebaut, C., and De Bliequy, J., dye sticks, etc., (P.), B., 205. machines for dyeing of textile fabrics, (P.), B., 977.

Callendar, H. L., extended steam tables, B., 663.

Callendar, H. L., King, R. O., and Mardles, E. W. J., lubricating or similar oils, (P.), B., 161.

Callender's Cable & Construction Co., Ltd., and Bowyer, J.,

application of surface markings to vulcanised rubber, (P.),

Callis, C. C. See Kraus, C. A.

Callow, E. H., determination of chloride in animal tissues, A., 1191. Callow, R. K., and Gulland, J. M., phenanthrene derivatives, A., 1436.

Callow, R. K., Gulland, J. M., and Haworth, R. D., synthetical experiments on aporphine alkaloids. V. Laurotetanine; syntheses of 2:3:6:7- and 3:4:6:7-tetramethoxyaporphines, Ā., 709.

synthetical experiments on aporphine alkaloids. VI. isoThebaine; attempted syntheses of 3:4:5-trimetboxyaporphine, A., 1087.

Callow, R. K., and Hope, E., isatin anils. I. Isomerism of isatin-2-anil, A., 935.

Callow, R. K. Sec also Gulland, G. M.

Callow Rock Lime Co. See Travis, S. Callsen, J., and Winthrop Chemical Co., Inc., production of halo-

genated alcohols, (P.), B., 845\*

Calvert, R., relation of composition to properties of lacquer solvents, B., 403. revivification of used kieselguhr [from sugar refineries], B., 791.

Calvert, R., and Van Schaack Bros. Chemical Works, Inc., pyroxylin composition, (P.), B., 729.

Calvert, R. See also Van Schaack, R. H., jun. Calvert, S. See Richardson, L. R.

Calvery, H. O., [preparation of] mercury diphenyl, A., 1091.embryonic metabolism. III. Nitrogen distribution in the developing hen's egg, A., 1102.

determination of basic amino-acids in small amounts of protein, A., 1324.

embryonic metabolism. IV. Basic amino-acids of the hen's egg during development, A., 1334.

Calvery, H. O. See also Geiling, E. M. K.

Calvet, E., heats of hydrolysis of the amides; acetamide, A., 1389. Calvet, F. See Chattaway, F. D., and Garcia Banus, A. Calvet, J., influence of various salts on the dissolution of pure

aluminium in hydrochloric acid, A., 1020.

attack of aluminium by ammoniacal solutions, A., 1251. corrosion of aluminium, B., 438.

Calzavara, E., substances activating or determining the sensitivity of silver salts embedded in gelatin, B., 493.

Cambden, M. See Coward, K. H.

Cambi, L, univalent iron, cobalt, and nickel, A., 282. univalent iron, cobalt, and nickel, and nitrososulpho-salts,

A., 412.

Cambi, L., Bozza, G., and Masperi, D., action of calcium carbonate and of dolomite on zinc sulphate solutions, B., 354.

Cambi, L., and Clerici, A., reactions between ferrous compounds and nitric oxide, A., 780.

Cameron, A. E., and Morrison, I. F., troostite, B., 248. Cameron, A. T. [with Turner, K. R.], seasonal variation in calcium content of the blood-serum of the young white rat, A., 461. Cameron, A. T., and White, F. D., attempt to concentrate the

active principle of the adrenal cortex, A., 474. Cameron, D. H., derivation of reference values for the calomel

electrode used in  $p_{\rm H}$  determinations, A., 413.

Cameron, D. H., colorimetric hydrogen-ion determination, A., 413. Cameron, D. H., and Shearer, R., shaker for Clark hydrogen electrode vessel, A., 533.

Cameron, F. K., and Crockford, H. D., aqueous solutions of copper and ferrous sulphates, A., 767.

Cameron, F. K. See also Clifford, A. T., Collins, S. C., and Mcbane, W.M.

Cameron & Son, Ltd., L. See Etchells, H.

Cammell, Laird & Co., Ltd., Allen, J. McN., and Hague, A. P., surface-hardening of metal bodies or articles by heat-treatment, (P.), B., 523.

Cammidge, P. J., and Howard, H. A. H., determination of sugar

in blood and urine, A., 1190.

Camp, W. H., glutathione in plants, A., 1499.

Campbell, A. N., existence of liquid racemates, A., 981. physical identity of enantiomerides, A., 1370.

Campbell, B., nitrocellulose finishes, B., 403.

Campbell, D. F., recent developments in electric furnaces, B., 289. Campbell, D. F., and Electric Furnace Co., Ltd., manufacture of [refractory] linings of furnaces, (P.), B., 457.

Campbell, H. L. See Sherman, H. C. Campbell, I. G. M. See Read, J.

Campbell, J. A., absorption tower, (P.), B., 459.

Campbell, J. Argyll, gas tension at skin surface of man, A., 460. hydrogen in tissues, A., 460.

Campbell, J. Argyll, and Angus, T. C., water evaporated during

work, A., 465.

Campbell, J. D. See Macintosh & Co., Ltd., C.

Campbell, J. R., jun. See Race, H. H.

Campbell, N., hydrogen and the photo-electric emission from potassium, A., 1211.

Talbot's law in photo-electric cells, A., 1356. Campbell, N. R. See Gen. Electric Co., Ltd.

Campbell, S. E. See Ihrig, H. K. Campbell, T. P., treatment of iron ores, (P.), B., 176.

Campbell, W. A. See Reed, G. B. Campbell, W. B., inexpensive pyrex conductivity cell, A., 1161.

Campbell, W. E. See Burns, R. M.

Campbell, W. G., and Booth, J., effect of partial decay on the alkali solubility of wood, A., 858.

Campbell, W. H., apparatus for use in the treatment of solids with liquids, (P.), B., 268.

apparatus for bringing gaseous and liquid materials into

contact, (P.), B., 665.

Campbell, W. M. See Hixson, C. T.

Campbell, W. R., and Maltby, E. J., significance of respiratory quotients after administration of certain carbohydrates, A., 597. Campbell, W. R., and Soskin, S., gaseous exchange following the administration of dihydroxyacotone, A., 597.

Campbell, Achnach & Co., Ltd., Gillan, J., Swan, J. McP., and Garstang, T., manufacture of goods of india-rubber or the like, e.g., hot-water bottles, (P.), B., 485.
Campen, P. van, electrically heated thermostat, A., 786.

Campetti, A., ultra-violet spark spectra in liquids, A.,

Canadian Electro Products Co., Ltd., and Matheson, H. W., chewing gum, (P.), B., 301.

Canadian Electro Products Co., Ltd., Matheson, H. W., and Skirrow, F. W., synthetic gum or resin, (P.), B., 144.

Canadian Electro Products Co., Ltd. See also Matheson, H. W., Morrison, G. O., Nieuwland, J. A., and Reid, H. S.

Canal, F. Sco Karrer, P. Canals, E., physiological function of magnesium in plants, A.,

106, 613. treatment of oils and fats [medicinal paraffin], P., B., 189. Canaud, A, electrolysis of [solutions of electrolytes in] water with

alternating current, A., 774. Canfield, R. H. See Mehl, R. F.

Cannan, R. K. See Richardson, G. M. Cannegieter, D. See Aten, A. H. W.

Cannella, C. Sce Costa, D.

Canneri, G., separation of pure yttrium from yttrium earths, A., 158.

heterotri-salts. V. Heterotri-borates and their isomorphism with other heterotri-scries, A., 279

Canning Town Glass Works, Ltd., and Parnaby, J. J., [endless conveyor for] lehrs, annealing furnaces, and the like, (P.), B., 209.

Cannon, H. C. See Bailey, E. M.
Canon, F. A., Andrews, C. E., and Selden Co., production of phthalic anhydride, (P.), B., 511.

Canon, F. A., and Selden Co., effluent gas treatment, (P.), B., 887. Canon, F. A. See also Jaeger, A. O., and Selden Co. Cantelo, R. C., osmotic and activity coefficients, A., 649.

Cantelo, R. C., and Billinger, R. D., ethyl acetate equilibrium, A., 139.

Capalbi, S. Seo De'Conno, E. Capel, W. H. Seo De Haas, W. J. Capen, R. G. See Davidson, J.

Caplan, S., and Combustion Utilities Corporation, purification of

tar acid bearing oils, (P.), B., 706. Capps, A. W. F., drying apparatus, (P.), B., 701.

Caracristi, V. Z. See Piron, E.

Carale, (Mile.) A. See Ionesco-Matiu, A.

Carbide & Carbon Chemicals Corporation, [cellulose ester] lacquer compositions, (P.), B., 219.

[nitrocellulose] lacquers, (P.), B., 530. Carbide & Carbon Chemicals Corporation, and Ray, A. B., manu-

facture of absorptive carbon, (P.), B., 423.

Carbide & Carbon Chemicals Corporation. See also Bagley, G. D., Curme, G. O., jun., Davidson, J. G., Farrar, M. G., Holden, H. C., Lommen, F. W., Massa, R. F., Ray, A. B., Thompson, H. E., and Young, C. O.

Carbondale Machine Co. See McCabe, E. B.

Carbonisation Société Générale d'Exploitation des Carbones, manufacture and use of metallurgical carbons, (P.), B., 915.

Carbonisation Société Générale d'Exploitation des Carbones, and Jakova-Merturi, G., carbonisation and distillation of wood and coal, (P.), B., 1005.

Carborundum Co., manufacture [mounting] of abrasive articles, (P.), B., 56. manufacture of rubber-bonded abrasive articles, (P.), B., 598.

[tunnel] kilns, etc., (P.), B., 979.

manufacture of abrasive wheels, (P.), B., 1016. Carborundum Co., and Doerschuk, V. G., manufacture of carbon electrodes and other refractory articles, (P.), B., 684.

Carborundum Co. See also Force, E. B. Carborundum Co., Ltd., and Hawke, C. E., furnaces, (P.), B., 77.

Carburol A .- G. See Wolf, Hermann,

Cardwell, A. B., effects of a crystallographic transformation on the photo-electric and thermionic emission from cobalt, A., 969. Carelli, A., theory of sensitised fluorescence, A., 377, 625.

Carl, H. H., and Muchlhof, H. E., hydraulic separator, (P.), B., 499.

Carleton, R. A., electrical heating by the container-resistance method, B., 605. Carlsohn, H. See Hantzsch, A.

Carlson, A., increasing the output of mechanical roasting furnaces, (P.), B., 725. Carlson, C. L.

See Gröndal, J. G.

Carlson, O. H., [manufacture of soft] soap, (P.), B., 529.

Carman, A. P., and Schmidt, C. C., dielectric constants of electrolytic solutions for various concentrations, A., 1386.

Carman, A. P., and Smith, K. O., dielectric constants of three electrolytes by a static balance electrometer method, A., 1386. Carman, A. P., Young, O. B., and Smith, K. O., static balance electrometer method for measuring dielectric constants of electrolytes, A., 1386.

Carman, F. J., manufacture of oxidation products of hydrocarbons, (P.), B., 315.
Carmichael, E. B., influence of chemical and other agents on the

toxicity and antigonic power of ricin. II. Detoxification of ricin. III. Production of immunity by means of ricin and detoxified ricin, A., 600.

Carmichael, (Miss) N. M., cathode phenomena in Geissler discharges through oxygen and nitrogen, A., 1205.

Carmody, W. R., silver chloride electrode, A., 1391.

measurement of E.M.F. in dilute aqueous solutions. I. Lead electrode, A., 1391. Carnahan, F. L. See Whitmore, F. C.

Carnochan, R. K., and Rogers, R. A., reports of vestigations: [Canadian] non-metallic laboratory, B., 819. Carnochan, R. K. See also Parsons, C. S.

Carnot, P., and Gruzewska, Z., excretion of nucleoproteins in the bile, A., 839.

Caro, N., and Frank, A. R., production of high-percentage calcium cyanamide or mixtures containing it, (P.), B., 53. production of an alkaline-reacting nitrogen fertiliser, (P.),

B., 68. production of an alkaline-reacting nitrogenous fertiliser with gradable alkalinity, (P.), B., 106.

Caro, N., and Frank, A. R., production of calcium cyanamide or mixtures containing it, (P.), B., 171.

production of high-percentage calcium or magnesium cyanamide

or mixtures thereof, (P.), B., 322.

Caro, N., Frank, A. R., and Stickstoffwerke Ges.m.b.H., production of the cyanamides of calcium and magnesium, (P.), B., 53.

production of cyanamides of the alkaline-earth metals and magnesium, (P.), B., 206.

Carobbi, G., chemical and spectrographic investigations on crocoite from Tasmania and wulfenite from Bleiberg, A., 168. chemical composition of liparite, A., 288.

presence of atacamite in the incrustation of the Vesuvian lava of [the eruption of] 1631, A., 289.

Carobbi, G. [with Restaino, S.], minerals of the apatite group, A., 168.

Caron, H., and Vanbockstael, L., new isomorphous series of

fluorine compounds, A., 526, 1411. Carothers, J. N., Booth, C. F., and Federal Phosphorus Co., production of sodium bisulphate, (P.), B., 94.

manufacture of sodium hydrogen pyrophosphate, (P.), B., 393. Carothers, J. N., and Federal Phosphorus Co., manufacture of trisodium phosphate, (P.), B., 53.

Carothers, W. H., polymerisation and ring formation. I. General theory of condensation polymerides, A., 1165.

Carothers, W. H., and Arvin, J. A., polymerisation and ring formation. II. Poly-esters, A., 1165.
Carothers, W. H., and Coffman, D. D., thermal decomposition of

sodium ethyl, A., 433 Carpanese, T., prochlorite from Monte Rosso di Verra (Monte

Rosa group), A., 420. Carpenter, C., and South Metropolitan Gas Co., operation of gas

producers, (P.), B., 313.

Carpenter, C. H., Keene, A. D., and Westinghouse Electric &

Manufacturing Co., cooled rim on cyanide pots, (P.), B., 522. Carpenter, C. H., and Westinghouse Electric & Manufacturing Co., [annealing] furnace, (P.), B., 213.

Carpenter, H. C. H., invisible exide films on metals, A., 642. Carpenter, S. W., White, G. N., and Pulp Binders Development Co., Ltd., manufacture of binder for binding an aggregate [fuel

briquettes], (P.), B., 805\*.
Carpenter, T. M., ethyl alcohol in fowls after exposure to alcohol

vapour, A., 1487.
Carpenter, T. M., Fox, E. L., and Sereque, A. F., acetone as a control substance for respiration and gas analysis apparatus, A., 858.

Carpenter's form of the Haldane gas analysis apparatus, A., 1113. Carpmael, A. See I. G. Farbenind. A.-G.

Carpmael, K. S. See I. G. Farbenind. A .- G.

Carpzow, J. B. See "Kolloidchemie" Studienges.m.b.H. Carr, A. R., and Murphy, D. W., vapour pressures of related compounds and the application of Duhring's rule, A., 252. Carr,  $\hat{C}$ . J. See Carr,  $\hat{D}$ .  $\hat{G}$ .

Carr, D. G., and Carr, C. J., manufacture of unsplinterable glass,

(P.), B., 776. Carr, E. P., isomerides of  $\Delta\beta$ -pentene. III. Ultra-violet absorption spectra of isomeric △β.pentenes, A., 1420.

Carr, F. H., Culhane, K., Fuller, A. T., and Underhill, S. W. F., reversible inactivation of insulin, A., 1495.

Carr, H. W., recovering [erystallisable] values by evaporation,

(P.), B., 192. Carr, M. S., and Brown, G. G., gaseous explosions. VII Effect of lead tetra-ethyl on rate of rise of pressure, B., 1037.

Carr, R. H., Watson, C. B., and Pure Oil Co., low-temperature distillation of bituminous coal, (P.), B., 587.

Carr, W. M., and Ashley, T. J., coal distillation apparatus, (P.), B., 844\*.

Carrara, N., gaseous mixtures, A., 638.

Carrelli, A., new phenomenon of diffusion: Raman effect, A., 490. longitudinal distribution of photo-electrons, A., 735, 1121, 1211\*. Carrelli, A., Pringsheim, P., and Rosen, B., Raman effect in aqueous solutions and the polarisation of the Raman lines, A., 120.

Carreras, R. S., manufacture of bismuth oxide, bismuth carbonate, or other compounds of bismuth, (P.), B., 322.

Carrier, W. H., and Buffalo Forge Co., cooling system, (P.), B., 2. Carrier Engineering Co., Ltd., and Owen, W. H., heat exchangers and manufacture of tubes provided with gills, (P.), B., 495.

Carrière, E., and Castel, P., transformation of chromates into dichromates, A., 140.

Carrière, J. F., fluorescence of oils and fats, B., 26.

differences in crude soya-bean oils from various sources, B., 27.

determining the type of an emulsion, B., 837. Carroll, B. H., and Hubbard, D., sensitisation of photographic emulsions by colloidal materials, B., 378.

Carruthers, G. H., and Harrison, T. H., application of Talbot's law to photo-electric cells with a non-linear illumination-current characteristic, B., 440.

Carruthers, R. J., manufacture of paint [from celluloid, etc.], (P.), B., 989.

covering articles with non-inflammable celluloid, (P.), B., 1011. manufacture of [fire- and water-proof] paint, adhesive, etc., (P.), B., 1023.

Carson, C. M., determination of total moisture in carbon blacks, B., 1003.

Carson, C. M., and Sebrell, L. B., carbon black [in rubber], B., 1024.

Carson, D. A. See Palmer, W. W.
Carson, W. E., preparation of [dry-ground] limestone [for fertilisers], (P.), B., 832.
Carstens, C. W., occurrence of titanium in titaniferous slags,

A., 19.

Carstens, II. See I. G. Farbenind. A.-G. Carstensen, M. See Embden, G.

Carswell, T. S., physical properties of guaiacol, A., 1441.

Carter, B. C., centrifugal separators and coolers, (P.), B., 498, 628\*

Carter, (Miss) E. See Wick, (Miss) F. G.

Carter, E. G., and Greaves, J. D., nitrogen-fixing micro-organisms of an arid soil, B., 222.

Carter, J. C., production of photographic colour prints and transparencies, (P.), B., 454. Carter, J. M. See Crowell, W. R.

Carter, J. S., and Hoskins, C. R., solubility of iodine in solutions of halides, A., 501. Carter, N. M. See Hibbert, H.

Carter, P. G. See Read, J.

Carter, R. H., solvelities of some inorganic fluorides in water at 25°, A., 25.
Carter, R. H., and Roark, R. C., composition of fluorides and fluosilicates sold as insecticides, B., 391.
Carter, S. R., and Megson, N. J. L., phase-rule investigation of fluorides.

cupric bromide in aqueous and hydrobromic acid solutions, A., 30. Carter, S. R. See also Bredig, G.

Carter, W. W., and Nelson, H. T., production of a cellulose product, (P.), B., 204.

Cartland, G. F., and Koch, F. C., effect of proteins and vitamins

on hamoglobin production in the rat, A., 206. Cartledge, G. H., studies on the periodic system. I. Ionic potential as a periodic function. II. Ionic potential and related properties, A., 269. Cartwright, C. H. See Badger, R. M.

Cartwright, K. St. G., staining fungal mycelium in wood sections, A., 857.

Cartwright, T., annealing furnace, (P.), B., 398.

Cartwright, V., determination of air in plastic [clay] mixes, B., 644.

Carugati, M. See Ferrari, A.

Carughi, A., and Paoloni, C., manufacture of chloride of lime, (P.), B., 851.

Carusi, R., pancreatic secretion, A., 209. Carver, E. K. See Sheppard, S. E.

Carveth, H. R., and Roessler & Hasslacher Chemical Co., control of rate of oxidation [manufacture of sodium monoxide], (P.), B., 18\*. production of sodium perborate, (P.), B., 643.

Casale, L. (Casale-Sacchi, M.), production of hydrogen-nitrogen mixtures, (P.), B., 644\*

Casale-Sacchi, M., production of hydrogen, or hydrogen-nitrogen mixtures, or hydrogen-carbon monoxide mixtures, (P.), B., 17.

Casale-Sacchi, M. Se o Casale, L. Cascao de Anciaes, J. H., and Trincao, C., absorption of dextrose by protein precipitates, A., 503.

Case, E. M., glycolysis in muscle and other tissues, A., 602.

Case, F. H., and Hill, A. J., new methylcytosine, A., 827. Case, F. H., and Reid, E. E., 1.2-dialkylcyclopentane derivatives, A., 67.

Casey, M. T. See Ryan, H. Cash, W. A. See Stephens, F. G. C. Caspari, W. A., crystallography of aliphatic dicarboxylic acids, A., 126.

See Beck, K. Casper, E.

Cassar, H. A. See Baldeschwielder, E. L.

Cassel, H., measurement of surface tension in the laboratory and works, B., 837.

Cassella & Co. G.m.b.H., L., manufacture of dyes of the anthra-quinone series, (P.), B., 164.

manufacture of [vat] dyes of the anthanthrone series, (P.), B., 674. Cassen, B., spectral intensities of radiation from non-harmonic and aperiodic systems, A., 111.

Castagna, S. See Visco, S.

Castel. See Astruc.

Castel, P. See Carrière, E. Castex, M. R., and Schteingart, M., action of guanidine derivatives in diabetes, A., 841.

Castle, G. C., Wood, C., and Beecroft & Partners, Ltd., briquettes for use in refining or treating molten metals [iron], (P.), B., 984. Casty, R. See Niederl, J. B.

Cataldo, A. G. di S. See Galletti, A. Catherwood, M. P., and De Turk, E. E., relation of soil type to the exchangeable calcium and magnesium in some Illinois soils,

Catineau, A. Sec Society of Chemical Industry in Basle.

Catlett, C., manufacture and use of oxysalt [calcium oxychloride] composition, (P.), B., 941. Catlin, G. W. See Lyons & Co., Ltd., J.

Caton, J. L., thermostats [of float-valve type], (P.), B., 545. Cattaneo, G., technique and economics of the Edeleanu process

for refining mineral oils, B., 118.

filters particularly applicable for the treatment of oil and petrol, (P.), B., 308.

Cattelain, E., Jena filter plates of porous glass in biological

analysis, A., 478.

Cattoir, F. R., and Parks, G. S., glass. III. Dielectric constants of glassy and liquid dextrose, A., 980.

Cau, M., birefringence and dichroism of thin layers of iron obtained by distillation, A., 251, 385.

preparation, optical and magneto-optical properties of very thin iron layers, A., 633.

Caudri, J. F. M., velocity of hydrolysis of esters and lactones by sodium hydroxide in mixtures of two and three solvents,

A., 655. partition of sodium between sodium hydroxide and sodium ethoxide or sodium methoxide in ethyl- or methyl-alcoholic sodium hydroxide solutions, A., 882.

titration of acetic anhydride in mixtures of ethyl or methyl alcohol and water, A., 1039.

Cauer, E. See Auwers, K. con.

Caugherty, W. E., Stroble, C. J. S., and Allegheny Steel Co., annealing of silicon steel sheets, (P.), B., 524.

Caunce, A. E. See Pickard, R. H. Cauquil, (Mlle.). See Godchot, M.

Cavalli, I., desulphurisation of pyrite cinders, (P.), B., 329. extraction of mercury from its ores and from residues of their roasting, (P.), B., 984.

Cave, H. M., number of high-velocity  $\beta$ -rays, A., 621. Cave, H. M. See also Braddick, H. J. J.

Cave, H. W. Sec Titus, R. W.

Cavell, A. C. See Bowen, E. J. Caven, R. M., and Johnston, W., double salt isotherms, A., 651\*.

Cawood, W. See Patterson, H. S. Cayzer, W. J. See Cayzer Tin Smelting Co. (Proprietary), Ltd. Cayzer Tin Smelting Co. (Proprietary), Ltd., concentration of ores containing platinum and metals of the platinum group, (P.), B., 563.

Cayzer Tin Smelting Co. (Proprietary), Ltd., and Cayzer, W. J., production of metallic tin, (P.), B., 525.

Cazaubon, E. See De Vilmorin, J.

Cazaud,  $\dot{R}$ ., protection of aluminium [against sea-water], B., 721. micrographic study of the corrosion of some light alloys in sea-water, B., 779.

Cazaud, R., and Petit, A., influence of occluded gas on the corrosion of copper-aluminium alloys by hydrochloric acid,

Cecchetti, B., and Godi, E., action of mercuric acetate on phenylcinchonic acid, A., 196.

Cecchetti, B., and Sarti, U., action of carbon disulphide on benzidine in presence of metallic oxides, A., 180. action of allylthiocarbimide on benzidine, A., 180.

Cecchetti, B. See also Plancher, G.

Celanese Corporation of America, manufacture of textile materials, (P.), B., 811.

Celanese Corporation of America. See also Bader, W., Dreyfus, C., Dreyfus, H., Eichengrün, A., Ellis, G. H., Hall, A. J., Martin, H. E., Palmer, C. W., and Skertchly, W. P.

Celeri, A. See Ferrari, A.

Celite Co. See Caldwell, L., and Stockton, McK. Cella, P. See Bonino, G. B.

Cellacotte Co., Inc., preservative package for articles, especially fruits, etc. (P.), B., 848.

Cellan-Jones, G., carbonisation of coal, etc., (P.), B., 423. Celsi, S. A., detection of gallic acid and tannin, A., 86.

Celulosa Hemmer Valet Société Anonyme Mexico. See Valet, E. C. H.

Centnerszwer, M., dissolution velocity of cadmium in hydrogen chloride solutions, A., 35.

velocity of dissolution of tin and some tin-copper alloys in acids, A., 657.

dissolution of metals and alloys, A., 782.
Centnerszwer, M., and Wittand, W., effect of anions on the rate of dissolution of aluminium, A., 1397.

Central Oil & Gas Stove Co. See Anderson, J. A.

Centrifix Corporation, non-rotative centrifugal separator, (P.), B., 801.

Centrifix Corporation. See also Hawley, C. G.

Ceramic Patent Holdings, Ltd., and Mellor, J. W., manufacture of [unglazed] ceramic ware, (P.), B., 130.

Ceramic Patent Holdings, Ltd. See also Mellor, J. W.

Cerini, L., apparatus for purification of impure solutions of caustic soda, etc., (P.), B., 719\*. Černych, V. See Kurnakov, N. S.

Certo Corporation. See Bender, W. A. Čescheva, Z. Sce Dumanski, A. V.

Ceylon Rubber Research Committee, causes of variation in plasticity [of rubber], B., 181. Chaborski, G. See Longinescu, G. G.

Chabot, G., modern malting methods, B., 573.

Chabrol, H. M., material for denaturing alcohol, (P.), B., 262.
Chace, W. M., and Chace Valve Co., W. M., thermostatic element, (P.), B., 1019.

Chace Valve Co., W. M. Sec Chace, W. M.

Chadburn, W. R., and De Laval Separator Co., preventing contamination of centrifugally purified liquids, (P.), B., 802\*. Chadeloid Chemical Co. See Ellis, C., and Longovoy, B. N.

Chadwick, J., the structure of atomic nuclei, A., 622.

Chadwick, J. See also Rutherford, (Sir) E.

Chadwick, V. R., washing of smoke and fumes from furnaces, etc., (P.), B., 801.

Chaffer, C., and Hargreaves, H., coating for metals, (P.), B., 563. Chagnon, A., manufacture of calcium carbide and phosphorus, (P.), B., 206.

Chahovitch, X., and Vichnjitch, M., phosphorus, calcium, and potassium contents of artificially induced peritoneal exudates, A., 1099.

changes in the scrum-inorganic phosphorus, -calcium, and -potassium in rabbits on intracardiac or subcutaneous injection of peptone, A., 1105.

Chaikov, I. L., and Soskin, S., fate of acetoacctic acid in normal and diabetic dogs before and after evisceration, A., 211. Chakhno, A., low-temperature carbonisation of coal from the

South Muscovite basin, B., 309. Chakravarti, D. N., and Dhar, N. R., absorption of ions by

solutions of aluminium hydroxide and vanadium pentoxide, A., 133.

Chakravarti, G. C., thiophthalic acids. I., A., 699\*. Chakravarti, G. C., and Saha, J. M., organic cyclic polysulphides; condensation of ethyl mercaptan with di- and tri-chloroacetic acids, A., 676\*

Chakravarti, S. N., [attempted] syntheses of  $\psi$ -opianic acid. I., A., 814.

Chakravarti, S. N., and Dhar, N. R., oxidation of carbohydrates, fats, and nitrogenous substances by hydrogen peroxide and ferric salts, A., 1277.

Chakravarti, S. N., and Dutt, S., chromium powder in organic synthesis, A., 54.

new synthesis of benztriazole derivatives, A., 77.

Chakravarti, S. N., and Perkin, W. H., jun., synthesis of isoopianic acid, A., 314. synthesis of 3:10-dimethoxytetrahydroprotoberberine, A., 335. Chakravarti, T., and De, S., oxidation. II. Action of ferric chloride and hydrogen peroxide on s- and as-disubstituted thiocarbamides and synthesis of thiodiazoles, A., 335.

Chakravarti, T.K. See Guha, P.C. Chalatov, S.S. See Nekludov, W.N. Chalfin, E.,  $\gamma$ -radiation of radioactivo elements, A., 485. Chalika, J.P., treatment of tea in course of manufacture, (P.), B., 415.

Chalisev, A. A. Sec Dumanski, A. V.

Chalk, L. Sec Foster, J. S.

Chalkley, L., jun., self-regulating gas flow-meter, A., 673. vapour-phase hydrolysis of chloro- and bromo-benzene, A., 1173.

Chalklin, F. C. See Richardson, O. W.

Challenger, F., and Klein, L., formation of l-malic acid from fumaric acid by Aspergillus niger, A., 1165.
 Challenger, F., Klein, L., and Walker, T. K., production of kojic

acid from pentoses by Aspergillus oryza, A., 1042.

Chalmers, J. A., ionisation measurements of y-rays, A., 115. approximate method of determining the high-velocity limits of continuous  $\beta$ -ray spectra, A., 1124.

Chalmeta, A. See Hérissey, H.

Chalonge, D., and Götz, F. W. P., diurnal and nocturnal measurements of the quantity of ozone in the upper atmosphere, A., 1417. Chalonge, D., and Lambrey, M., continuous spectrum of the hydrogen tube, A., 616.

Chalonge, D., and Zé, N. T., continuous spectrum of the hydrogen

atom, A., 963.

Chamagne, G. J. B., treatment of the gaseous products liberated

in the carbonisation of marine alge, (P.), B., 160. Chamber Ovens, Ltd., and Pintsch & Otto Ges.m.b.H., arrangement for admitting steam through the bottom cover of vertical-

chamber ovens for gas manufacture, (P.), B., 746. Chamber Ovens, Ltd. See also Bowater, N. J., and Lymn, A. H. Chamberlain, E. N., cholesterol in tissues, A., 90. Chamberlain, G. D., and Vanderbilt Co., Inc., R. T., pickling and cleaning metals [iron and steel], (P.), B., 856.

Chamberlain, G. E. See McCabe, E. B. Chamberlain, H., utilisation of light-metal scrap, (P.), B., 900. Chamberlain, J., and Periam, H., manufacture of photographic films, (P.), B., 265.

[composite] strengthened glass, etc., (P.), B., 776.

Chamberlain, J. S., and Dull, M. F., preparation of compounds of the type of malachite-green and of phenolphthalein by means of the Grignard reaction, A., 62.

Chamberlin, D. S., and Bloom, E. B., thermal treatment of natural gas, B., 1038.

Chamberlin, D. S., Theis, E. R., Schlingman, P. F., and Long, J. S., drying oils. X. Fumes from oil kettles, B., 442.

Chamberlin, D. S. See also Ullmann, H. M.

Chamberlin, E. See Lewis, H. F.

Chambers, E. T., producing mixtures of liquids and gases, (P.), B., 1036.

Chambers, P., and Security Manufacturing Co., apparatus for carburising [case-hardening steel], (P.), B., 686. Chambige, P. See Baume, G.

Chambon, M., synthesis of tropic acid, A., 1068\*. Chambrin, N. See Cotoni, L.

Chamié, (Mile.) C., grouping of the atoms of radioactive elements, A., 620.

Champion Coated Paper Co. See Bradner,  $D.\ B.$  Champion Porcelain Co. See Jeffrey,  $J.\ A.$ 

Chance, H. M., separation of materials of different sp. gr., (P.),

Chance, T. M., separation of materials of different sp. gr., (P.), B., 2.

burning of fuel, (P.), B., 667. Chance Bros. & Co., Ltd., and Gould, C. E., [sheet] glass, (P.),

B., 816. Chance Bros. & Co., Ltd., Gould, C. E., Hampton, W. M., and Martin, H. S., glass, (P.), B., 645.

Chandelle, R., adsorption of phosphoric acid by stannic sulphide, A., 1231.

determination of carbon dioxide in carbonates which may contain sulphides, A., 1257.

Chandler, D. See South Metropolitan Gas Co.

Chandler, W. L., preparation of "calcicated" iodine, (P.), B., 207. Chandrasekhar, S., Compton scattering and the new statistics, A., 1120.

Chang, H. C. See Lim, R. K. S. Channing, R. H. See Lowe, S. P.

Channing, R. H., jun. See Phelan, R. E.
Channon, H. C. See Smith, W. S.
Channon, H. J., and Chibnall, A. C., ether-soluble substances of cabbage-leaf cytoplasm. V. Isolation of n-nonacosane and di-n-tetradecyl ketone, A., 729.

Channon, H. J., and Collinson, G. A., blood-fat. I. Preparation

and general characteristics, A., 1189.

unsaponifiable fraction of liver-oils. V. Absorption of liquid paraffin from the alimentary tract in the rat and the pig, A., 1194

Channon, H.J. See also Chibnall, A.C.

Chanoz, M., gelatin and copper sulphate solutions, A., 25.

electrolysis of copper sulphate solutions separated by an animal membrane, A., 36.

Chanoz, M., and Cluzet, G., electrical conductivity of ethyl alcohol

and its aqueous solutions, A., 1146. Chanutin, A., and Silvette, H. [with Rawles, B. W., jun.], effect of fasting and of creatine feeding on creatine content of rat tissues, A., 213.

Chao, C. Y., problem of the ionised hydrogen molecule, A., 972.

Chapin, R. M., dichloroamine, A., 1026.

Chapin, W. R., metal cement, (P.), B., 330

Chaplin, R., sorption of carbon tetrachloride at low pressures by activated charcoals. I., A., 133.

Chaplin, R. See also Allmand, A. J.

Chapman, A. C., individuality of humulene, A., 450.

essential oil of hops, B., 538.

standardisation of the strength of the organism (Bacterium C), used in the Chapman biological method for the determination of the preservative power of hops, B., 697.

Chapman, A. W., preparation of substituted diphenylamines, A., 550.

dynamic isomerism involving mobile hydrocarbon radicals. I. The triarylbenzenylamidines, A., 1294.

Chapman, D. L., and Grigg, P. P., rate of photochemical combination of chlorine and hydrogen in glass capillary tubes, A., 154.

Chapman, D. L., and Hall, W. K., catalysis by silver of the union of hydrogen and oxygen, A., 1020.

Chapman, E. See Brit. Dyestuffs Corp., Ltd., and Imperial Chem.

Industries, Ltd. Chapman, H. D., precipitation of calcium oxalate in the presence of iron, aluminium, titanium, manganese, magnesium, and phosphates, with special reference to the determination of total soil calcium, B., 142.

Chapman, O. W., effect of lecithin in dairy products on butter

fat determinations, B., 534.

Chapman, S., electrical conductivity of stellar matter, A., 117. thermal diffusion of rare constituents in gas mixtures, A., 387. Chapman, W. B. See Andrews, C. W.

Chapman, W. H. See Dunlop Rubber Co., Ltd. Chapman, W. R., separation of substances of different sp. gr.,

(P.), B., 191.
Chappell, M. L., and Contact Filtration Co., revivifying spent [mineral oil] clarifying and decolorising agents, (P.), B., 884. Chappell, M. L. See Black, J. C

Chappelle, P. J., clarifier, (P.), B., 876. Charbonneau, A. See Girard, P.

Charcolite Corporation. See Rodgers, R. L.

Chardonnens, L., nitration of phenyl p-tolyl ketone and phenyl m-xylyl ketone, A., 928.

Chargaff, E., reactivity of iodine cyanide in different organic solvents, A., 1027.

Charit, A., phosphorus exchange. II. Rôle of the spleen. III. Effect of adrenaline, A., 599.

Chariton, J., and Lea, C. A., counting of scintillations produced by a-particles. I., II. Determination of the efficiency of transformation of the kinetic energy of α-particles into radiant energy. III. Practical applications, A., 485. Charles, H. L., smelting furnace, (P.), B., 855.

Charlet, M., bile-acid content of blood under various physiological conditions, A., 1095.

Charliers, N., rapid analysis of butter, B., 574. Charlton, W. See Anderson, C. G.

Charmandarian, M. O., barley-malt catalase. I., II., and III., A., 471, 722. preparation of colloidal gold solutions by the use of alkaloids,

A., 1379. Charola, F. See Williams, A. T. Charonnat, R. See Delaby, R. Charpy, G., and Jacqué, L., reduction of the alkaline-earth sulphates in metallurgical operations, B., 249.

Charrier, G., di-2-(a\beta-naphth-1:2:3-triazolyl)stilbene, A., 1315. Charrington & Co., Ltd., and Reavenall, A. C., treatment of air for cooling and drying [brewing] casks, otc., (P.), B., 491. Charro, A. See Léon, A.

Charro, O., preparation of sodium hypobromite reagent [for determination of carbamide], A., 593.

Chartier, C. M., manufacture of sparkling wine, (P.), B., 574. Chaskin, L., and Nigmann, G., does the oxidation quotient of dextrose-free urine change on keeping owing to decomposition? A., 464.

Chassevent, L. See Jolibois, P.
Chassevent, L. E., manufacture of marble plaster (artificial marble), (P.), B., 396.
Chatelain, W., pumps for viscose, (P.), B., 774.
Chater, W. J., effect of heat on wetted, vegetable-tanned leathers.
I., II., III., and IV., B., 257, 295, 446, 1025.

Chatfield, C., and McLaughlin, L., proximate composition of fresh fruits, B., 535.

Chattaway, F. D., and Calvet, F., condensation of chloral with anisic acid, with p-nitroanisole, and with 2:6-dichloroquinol,

preparation of 1:3-benzdioxin, A., 573.

Chattaway, F. D., and Humphrey, W. G., action of o-phenylenediamines on dihydroxytartarie acid, A., 708.

Chattaway, F. D., and Irving, H., action of potassium cyanide on chloro-aldehydes, A., 795.

Chattaway, F. D., and Morris, A. A., condensation of dichloro-acetaldehyde with phenols, A., 182.

Chattaway, F. D., and Parkes, G. D., nicotine tetrachloroiodide, A., 944.

Chatterjee, B. D. See Ghosh, P. N.

Chatterjee, H. N. Chatterjee, N. P. See Sen, H.K.

Chatterjee, N. P. See Chaudhury, S. G. Chatterjee, N. R. See Chopra, R. N., and Ghosh, S.

Chatterji, A. K. See Mukherjee, B. C. Chaudhuri, D. P. R. See Ray, B. B.

Chaudhury, S. G., and Chatterjee, N. P., effect of non-electrolytes on the coagulation of colloids. III. Copper ferrocyanide sol, A., 393.

Chaudhury, S. G., and Ganguli, A., effect of non-electrolytes on the stability of colloids. II. Ferric hydroxide sol, A., 135.
Chaudhury, S. G. Sco also Chopra, R. N.

Chaudron, G. See Villachon, A., and Waché, X.

Chaudun, A. See Colin, H. Chaussin, J. See Blanchard, E. See Colin, H.

Chauveau, L., and Vasseur, A., raisin wine, B., 793.

Chauvenet, E., and Davidowicz, J., zirconium iodide, A., 1154. Chavan, J. J. See Wieland, II.

Chaze, J., location and disappearance of alkaloids in the epidermis of the tobacco leaf, A., 107. Cheeseworth, H. D., and Cooper, E. A., disinfectant action. III.

Unsaturated compounds as germicides, B., 540.

Cheetham, H. C. See Redman, L. V. Cheltnam, C. H. W. See Pochin, H. S.

Chemical Construction Co., concentration of nitric acid, (P.), B., 850.

Chemical Engineering & Wilton's Patent Furnace Co., Ltd., Wilton, T. O., and Parker, J., drying of fuel gases, (P.), B., 385. Chemical Engineering & Wilton's Patent Furnace Co., Ltd., Wilton, N., and Wilton, T. O., apparatus for treating gases with liquids, (P.), B., 543.

Chemical Engineering & Wilton's Patent Furnace Co., Ltd. Sec

also Wilton, T. O.

Chemical Waterproofing Corporation. See Aaronson, H. A. Chemieprodukte G.m.b.H., protecting cables, pipes, and other metallic bodies against corroding influences, (P.), B., 856.

Chemieverlahren G.m.b.H., preparation of alkali sulphates, (P.),

production of a complete fertiliser, (P.), B., 832.

Chemipulp Process Inc. See Dunbar, T. L.

Chemisch-Pharmazeutische Akt.-Ges., production of solutions of quining base adapted for therapeutic use, (P.), B., 699\*.

Chemisch-Pharmazeutische Bad-Homburg. Akt.-Ges. Liebrecht, A.

Chemisch-Technische Ges.m.b.H., briquetting of fuels, (P.), B., 546. producing a solid fuel in coarse lumps from finely-granular anthracite or similar lean coals and bituminous coal, (P.), B., 631.

Chemisch-Technische Ges.m.b.H., and Sternberg, S., production of coke, (P.), B., 44.

Chemische Fabrik auf Aktien (vorm. E. Schering), manufacture of alkylated phenols and their hydrogenated products, (P.), B., 164.

manufacture of condensation products from m- or p-cresol and aliphatic ketones, (P.), B., 236.

manufacture of alkylisopropenylphenols and alkylated cou-margans, (P.), B., 236.

manufacture of thymol, its isomerides or homologues, and their

hydrogenation products, (P.), B., 237. Chemische Fabrik auf Aktien (vorm. E. Schering), Borgwardt, E., Feldt, A., Gehrke, M., and Schoeller, W., pharmaceutical products, (P.), B., 227\*.

Chemische Fabrik auf Aktien (vorm. E. Schering), Clere, R., Jordan, H., and Schoeller, W., production of menthol, (P.),

B., 797\*.

Chemische Fabrik auf Aktien (vorm. E. Schering), Dohrn, M., and Dirksen, R., manufacture of chloro-iodides of 2-amiuo-pyridine, (P.), B., 836\*.

Chemische Fabrik auf Aktien (vorm. E. Schering), and Jordan, H., manufacture of alkylisoalkylenephenols [isopropenyleresols]

and alkylated coumarans, (P.), B., 316. Chemische Fabrik auf Aktien (vorm. E. Schering), Jordan, H., and Schoeller, W., manufacture of alkylisoalkylcyctohexanols [menthol], (P.), B., 427\*.

Chemische Fabrik auf Aktien (vorm. E. Schering), Schmidt, Kurt, and Schoeller, W., manufacture of pharmaceutical preparations, (P.), B., 151\*

Chemische Fabrik auf Aktien (vorm. E. Schering), Schoeller, W., and Schotte, H., manufacture of [mixed] alkaloid salts, (P.),

Chemische Fabrik auf Aktien (vorm. E. Schering), Schotte, II., and Priewe, H., preparation of N-monosubstituted ethylenediamines, (P.), B., 37.

Chemische Fabrik K. Albert G.m.b.H., improvement of recent

natural acid resins, (P.), B., 27.

Chemische Fabrik in Billwarder, and Kuhlwein, F. L., separation of clay from clay-bearing materials [coal, otc.], (P.), B., 87. Chemische Fabrik Buckau, production of aqueous emulsions of bitumen, (P.), B., 46.

Chemische Fabrik Gross-Weissandt G.m.b.H., and Seidler, P., preparation of large sal ammoniac crystals, (P.), B., 128.

Chemische Fabrik Grünau, Landshoff & Meyer Akt.-Ges., treat-

ment of concrete surfaces, (P.), B., 599.

Chemische Fabrik von Heyden. Sec Zellmann, R.

Chemische Fabrik Jacobus Ges.m.b.H., and Budowski, I., dressing medium for textiles [silk or artificial silk], (P.) B., 640. Chemische Fabrik Johannisthal G.m.b.H., and Trostler, F., recovery of copper and nickel, (P.), B., 525. Chemische Fabrik L. Meyer. See Meyer, L.

Chemische Fabrik Milch Akt.-Ges., production and employment of cleansing, emulsifying, and wetting agents, (P.), B., 292.

Chemische Fabrik Milch Akt.-Ges. See also Oranienburger Chem. Fabr. A.-G.

Chemische Fabrik Pott & Co. See Sajitz, R.

Chemische Fabrik vorm. Sandoz, oxidation of aldoses, (P.), B., 33. separation of the cardio-active glucoside of Bulbus scilla into two components, (P.), B., 150.

dyeing of fibres consisting of cellulose mono- or di-acetate, (P.), B., 354.

manufacture of Raphanus preparations for medical use, (P.), B., 377.

manufacture of chemotherapeutical compositions, (P.), B., 339. new emctine salts, (P.), B., 454. treatment ["animalisation"] of cotton and artificial silk fibres,

(P.), B., 596.

manufacture of therapeutic calcium preparations, (P.), B., 698. acridine derivatives, (P.), B., 699.

preparation of effect threads, (P.), B., 774, 076.

Chemische Fabrik vorm. Sandoz. See also Burckhardt, E., Du Bois, E., Knecht, O., Kreis, W., Rheiner, A., Rothlin, E., and

Stoll, A. Chemische Fabrik Schlutup M. Stern. See Stern, M.

Chemische Fabrik & Seruminstitut "Bram." G.m.b.H., separation of mixed substances, (P.), B., 264.

Chemische Fabrik Stockerau F. Pollak. See Pollak, F. Chemische Fabrik Stockhausen & Co., bleaching of natural and artificial fibres, (P.), B., 430. mercerisation of cotton, (P.), B., 470.

Chemische Fabrik Stockhausen & Co., manufacture of emulsions, (P.), B., 608.

[improving the physical properties of] artificial silk, (P.), B., 893.

Chemische Fabrik Weissenstein Ges.m.b.H., thermal treatment of non-cementable metals and alloys, (P.), B., 857.

Chemische Werke vorm. H. & E. Albert, evaporating ovens, (P.),

Chemnitius, F., preparation of histidine, A., 76. technical isolation of scopolamine, B., 36. manufacture of "converted" saltpetre, B., 243.

Chemnitius, F., and Barfuss-Knochendöppel, H.-R., constitution of gold resinate, B., 104.

Chen, K. K., copper sulphate-sodium hydroxide test for ephedrine and related compounds, A., 583. Chen, K. K., and Jensen, H., Ch'an Su, the dried venom of the

Chinese toad, A., 601.

Chen, K. K., Wu, C. K., and Henriksen, E., relationship between pharmacological action and chemical constitution and configuration in optical isomerides of ephedrine and related compounds, A., 1105. Chen, K. K. Sco also Jensen, H.

Chen, T. See Tso, E. Chen, T. T. See Wu, H.

Cheney, M. B., and Cheney Chemical Co., anæsthetic gas and its manufacture, (P.), B., 699. Chency Chemical Co. See also Chency, M.B.

Cherbuliez, E., destruction of organic matter in the determination of ash constituents, A., 898.

chemotherapy of tuberculosis, A., 1493. Cherbuliez, E., and Plattner, P., determination of amino acids formed by hydrolysis of proteins. II. Esters of acetylated amino-acids, A., 685.

Cherbuliez, E., and Wahl, R., hydrolysis of proteins by hydrofluoric acid, A., 204.

Cherchez, V. See Locquin, R. Chernoff, L. H., bromoguaiacol carbonate; determination of guaiacol carbonate, A., 1441.

Cherry, G. L., and De Laval Separator Co., reclaiming used

lubricating oil, (P.), B., 589.
Cherry, O. A., Kurath, F., and Economy Fuse and Manufacturing Co., manufacture of phenolic condensation products, (P.), B., 728, 903.

Chesavon Fabrik Chemisch-Technische Pharmazeutische Präparate

Ges.m.b.H., substances for cleansing purposes, more especially for removing [theatrical] make-up, (P.), B., 483.

Chesney, J. W. D., and Chesney Process, Inc., sterilisation and activation of [liquid] food, (P.), B., 868.

Chesney, J. W. D., and Solar Research Corporation, treatment of

foods, (P.), B., 451.

Chesney Process, Inc. See Chesney, J. W. D.

Chesnut, F. T., magnesia-graphite reactions at high temperatures, B., 16.

Chesterfield, P. C., and Chesterfield Metal Co., alloys and their manufacture, (P.), B., 604. high-speed alloy, (P.), B., 604. Chesterfield Metal Co. See Chesterfield, P. C.

Chevalet, P. A. A. Sce Cusin, M.

Chevenard, P., limit of solubility of copper in reversible ferronickels, A., 1375.
Chevenard, P., and Portevin, A., recovery of hyper-tempered

steels, B., 647.

Chevenard, P., Portevin, A., and Wache, X., dilatometric study of some univariant two-phase reactions, A., 1138.

Chevenard, P. See also Portevin, A.

Chevrie, F., and Grille, M. L., electrolytic preparation of antiseptic and cicatrising solutions, (P.), B., 986.

Cheymol, J., composition of the root of Geum urbanum, L., A., 361. Chibnall, A. C., and Channon, H. J., ether-soluble substances of cabbage-leaf cytoplasm. VI. Summary and general conclusions, A., 729.
Chibnall, A. C. See also Channon, H. J.
Chichoeki, J. See Pecsalski, T.

Chick, H., effect on vitamin- $B_2$  of treatment with nitrous acid, A., 853.

Chick, H., and Roscoe,  $M.\ H.$ , assay of the antineuritic vitamin- $B_1$ in which the growth of young rats is used as a criterion, A., 852. attempt to separate vitamin-B2 from vitamin-B2 in yeast and a comparison of its properties with those of the antineuritic vitamin- $B_1$ , A., 852.

Chierici, E., dotection of formaldehyde in foods, B., 109.

Chikano, M., influence of amino-acids and their derivatives on adrenaline hyperglycæmia, A., 474.

micro-determination of adrenaline, and its application in the investigation of intermediate metabolism, A., 474.

Chikano, M., and Kominami, M., decomposition of adrenaline by serum, A., 461.

Child, R., and Pyman, F. L., bases containing two isoquinoline

rings, A., 1314. Child, R. O. See Anderson & Son, Ltd., D.

Chilowsky, C., manufacture of gas from [heavy] oils, (P.), B., 8, 347.

purifying and cooling the gaseous cloudy substance obtained by heat-transformation of heavy oils, (P.), B., 971, 1006.

China, F. J. E. See Burt, Boulton, & Haywood, Ltd. Chipman, J., approximate prediction of vapour pressure, A.,

Chipman, R. N., weed killer, (P.), B., 107.

Chiray, M., and Cuny, L., colorimetric determination of bile salts, A., 592.

Chistoni, A., and Milanesi, E., pharmacology of stabilised colloidal lead sulphide, A., 720.

Chitty, C. W., Kent-Jones, D. W., and Woodlands, Ltd., heat treatment of cereal substances, (P.), B., 492\*. Chlopin, V. G., and Kaufman, L. E., volumetric determination of

vanadium, iron, and uranium with titanium salts, B., 1046.

Chlopin, V. G., and Pasvik, M. A., migration of uranium and radium in the principal veins of the Tiuja-Mujun deposits, A., 904

Chloride Electrical Storage Co., Ltd., and Heap, B., electric accumulators, (P.), B., 783.

Chloride Electrical Storage Co., Ltd. See also Dean, H., Heap, B., and Lane, R. E.

Chloupek, J., origin of moldavite, A., 1035. Chloupek, J. See also Paneth, F.

Chokshi, N.M. See Brady, O.L. Cholopov, A. See London, E.S.

Chopin, L., transposition and purity of naphthyl methyl ketones, A., 561.

Chopin, M., control of a new method for the measurement of the temperature of a gas, A., 44.

determinations of the specific heat of [air], nitrogen, and carbon dioxide at high temperature, A., 990.

Chopra, N. D., and Bullen, F. J., heat treatment of steel, (P.), B., 563\*.

Chopra, R. N., Bose, J. P., and Chatterjee, N. R., Gymnema sylvestre in diabetes mellitus, A., 1331. Chopra, R. N., Gupta, J. C., and Chaudhury, S. G., action of

antimony compounds on the adrenals, A., 1336.

Chopra, R. N. Sec also Ghosh, S.
Chorazy, M. Sec Swientoslawski, W.
Chou, F. G., and Chou, T. Q., alkaloids of Corydalis ambigua (Yen-Hu-So). II. Corydalis, A., 477.

Chou, T. Q., alkaloids of Chinese Corydalis ambigua, Cham. et Sch. (Yen-Hu-So). III. Corydalis-I and monomethyl ethers of corydalis-F and -G., A., 1085.

Chou, T. Q. See also Chou, F. G. Chouchak, D., competition between cultivated plants and soil micro-organisms for mineral food; action of dried blood on

phosphate fertiliser, B., 789. Choulant, H., preparation of aluminium alloys for microscopical

examination, B., 722. Chowdhury, J. K., and Majumdar, P. C., composition of jute fibre with special reference to the use of chlorine dioxide as an

analytical reagent, B., 552.

Chrétien, A., ternary system water-sodium sulphate-sodium nitrate, A., 651.

quaternary system water-sodium nitrate-sodium chloridesodium sulphate, A., 1388.

Chrétien, A., and Cornec, E., equilibrium between water, sodium nitrate, and sodium chloride, A., 400.

Chrisman, C. S. See Humphreys & Glasgow, Ltd.

Christ, B. See Grasselli Dyestuff Corporation. Christ, W., and General Aniline Works Inc. and General Aniline Works, Inc., production of ice colours (P.), B., 1009\*.

Christeller, E., and Sammartino, R., histochemical detection of mercury in organs, A., 98.

Christensen, C. W. See North, C. O.

Christensen, J. H., multicolour screens for colour photography, (P.), B., 539.

Christensen, K., packing of cement, (P.), B., 396.

Christensen, L. M., nitrogen content of growing cultures of Mycoderma and of Saccharomyces cerevisia, A., 957.

Christensen, N. C., treatment of ores with chloride solutions, (P.), B., 726.

process of treatment of oxidised lead ores, (P.), B., 857.

Christian, B. C., and Hilditch, T. P., seed fats of the Umbellifera. II. Seed fats of some cultivated species, A., 855.

Christian, W. See Warburg, O. Christiansen, J. A., constitution of the polythionic acids, A., 122.

thermal formation of hydrogen chloride, A., 654, 897.
Christiansen, W. G. See Briod, A. E., Jones, W. S., Keelan, H. S., Moness, E., Smith, R. B., and Winkle, R. van.

Christie, A. W. See Lesley, B. E.
Christie, R. V. See Binger, C. A. L.
Christina, V., and Green, C. S., colloidal gold solution; preparation of gold solutions and their titration with permanent hydrogenion concentration standards, A., 26. Christman, A. A., and Mosier, E. C., purine metabolism. II.

Effect of ingestion of glycine on excretion of endogenous uric acid, A., 1102.

Christman, C. H., ultramicroscopic studies of colloids in water, B., 836.

Christman, C. H., and National Aluminate Corporation, treatment of corn syrup and corn-sugar liquors, (P.), B., 144

Christmas, W. W., rubber latex-protein compound, (P.), B., 864. Christomanos, A. A., fate of diphenylene oxide in intermediary metabolism of the rabbit, A., 596.

Christy, A., titanium band spectrum, A., 733.

quantum analysis of the blue-green bands of titanium oxide, A., 739.

Chromeplate, Inc. See Auerbach, R.

Chromium Corporation of America. See Schwartz, K. W. Chrzaszcz, T., Klodnicki, A., and Suchodolski, J., chemical com-

position and taste of potato spirit, B., 953. Chrzaszcz, T., and Tiukov, D., formation of acid by species of Penicillium, A., 355.

production of starch in moulds (Penicillium, Link); its relation

to acid production, A., 724.

Chudoba, K., manganese diaspore and manganophyll from Postmasburg, Griqualand West, A., 1264

crystallographic and optical properties of diaminozine chloride formed in the Leelanché cell, A., 1368.

Chudoba, K. See also Schwarz, R.

Chudožilov, L. K., 2:3- and 1:4-dinitronaphthalene, A., 803\*. Chufarov, G. I. See Perschke, V. K.

Chuit, P., and Hansser, J., reduction of methyl esters of polymethylenedicarboxylic acids with fifteen to twenty-one carbon atoms by sodium and alcohol, A., 1424.

Chuit, P., and Hausser, J. [with Malet, G.], hydroxypolymethylenecarboxylic acids with eight to twenty-one carbon atoms, A., 677. Church, H. F., physical characteristics of sponge rubber, B., 611. Chwala, A., mechanical dispersion of alkaline-earth and heavymetal salts of the phosphoric and arsenic acids, (P.), B., 814. manufacture of colloidal compounds, (P.), B., 987\*

Ciaceo, C., and Trimarchi, G., pathological fat metabolism. II. Conditions in which colloidal silver restrains phosphorus fatty degeneration, A., 1331.

Cimerman, C. See Duparc, L. Cioffi, P. P., and Bell Telephone Laboratories, Inc., magnetic material; [nickel-iron-cobalt alloy], (P.), B., 527.

Cissée, H. See Lindemann, H.

Citovich, E., electrochemical [oxidation and reduction] processes, (P.), B., 1021.

Cittert, P. H. van. See Burger, H. C.

Ciusa, R., strychnine and brucine. VIII., A., 201.

Ciusa, R., and Mega, P., action of bromine on some hydrazones.

Ciusa, R., and Musajo, L., Doebner reaction. VII. Synthesis with β-aminoanthracene, A., 578.

Claassen, H., recovery of sugar from the exhausted sludges or scums of [beet] sugar manufacture, (P.), B., 490.

[nourishment of press yeast with inorganic ammonium compounds], B., 833.

Clair, M.N., effect of sugar on concrete in large-scale trial, B., 474. Clancy, J.C., manufacture of low-boiling oils and cyanides, (P.),

treatment [cracking] of hydrocarbons, (P.), B., 916.

Clapham, T. A., apparatus for washing or scrubbing gas, (P.), B., 839.

Clapp, A. L., and Bennett, Inc., waterproof paper; greaseproof and waterproof paper, (P.), B., 469 production of waterproof paper, (P.), B., 1043.

Clapp, A. L. See also Kirschbraun, L. Clapp, E. I., and United States Industrial Alcohol Co., production of absolute alcohol, (P.), B., 337\*.

Clapp, M. H. See Brann, B. F

Clapperton, R. H., rags and their preparation for paper-making, B., 390.

Clar, E., polynuclear aromatic hydrocarbons and their derivatives. I. Dibenzanthracene and its quinones, A., 435. polynuclear aromatic hydrocarbons and their derivatives. IV. Naphthaphenanthrenes and their quinones, A., 922

Clar, E., John, F., and Hawran, B., polynuclear aromatic hydrocarbons and their derivatives. II. 2':3'-Naphtho-1:2-anthracene, its homologues and oxidation products, A., 689.

Clar, E., Wallenstein, H., and Avenarius, R., polynuclear aromatic hydrocarbons and their derivatives. III. Anthracenoanthracenes and their quinones, A., 689.

Clare, R. L., Brown, G. H., and Allen, F. B., terra-cotta kiln slab investigation, B., 209.

Clarens, J., and Péron, (Mme.), soils. IV. Classification of their acidic functions. V. Replaceable bases, B., 950. acidic functions. V. Replaceable Claringbold, W. E. See Pickup, H.

Clark, A. J., Percival, G. H., and Stewart, C. P., action of calcium ions on the frog's heart, A., 215.

Clark, A. M. See Lambert, B.

Clark, B., and Jones, E. O., effect of addition agents on the conductivity, cathodic polarisation, and grain size of deposits obtained from the cell: Cu|CuSO<sub>4</sub>,H<sub>2</sub>SO<sub>4</sub>|Cu, A., 1393.

Clark, E. See Todd Oil Burners, Ltd.

Clark, E. P., gossypol. V. Action of chromic acid on gossypol derivatives. VI. Action of boiling hydriodic acid on gossypol and derivatives; semi-micro Zeisel methoxyl method, A., 823. gossypol: a progress report, B., 698.

Clark, F. G. See Allan, W. G., and Robertson, F. D. S. Clark, F. S., wood distillation, (P.), B., 1005.

Clark, G. C. H. See Howards & Sons, Ltd.

Clark, G. L., X-ray contributions to the problem of polymerisation, A., 383.

recommended equipment of a modern X-ray laboratory for the study of structures of materials, B., 100.

Clark, G. L., and Anderson, H. V., X-ray study of the zonal structure of silica brick from the roof of a basic open-hearth furnace, B., 776. Clark, G. L., and Orden, S. L. van, röntgenographic study of

varieties of asbestos from different mines, B., 321.

Clark, G. L., and Smith, H. A., ultra-violet spectroscopy of flames of motor fuels. IV. Practical utilisation of a small quartzprism spectrograph for the determination of lead tetraethyl in gasoline, B., 504. Clark, G. L., and Tschentke, H. L., physico-chemical studies on

the mechanism of the drying of linseed oil. I. Changes in

density of films, B., 727.

Clark, G. L., and Yohe, G. R., X-ray investigations of optically active compounds. I. Proof of molecular asymmetry in optically active a aminophenylacetic acid, A., 1294.

Clark, G. L. See also Anderson, H. V., King, A. J., and Scroggie, A, G

Clark, H. H., and Clark Fibre Products Corporation, manufacture of moulded indurated-fibre articles, (P.), B., 773.

Clark, H. N., comparative tests on monolithic refractory cements, B., 519.

Clark, H. W., and Adams, G. O., sludge digestion and  $p_{\rm H}$  control, B., 379.

Clark, I.A.Sec Kauffmann, J. L.

Clark, L. H. See Takahashi, T.

Clark, N. A., and Collins, E. R., gravimetric determination of carbonates in soils, B., 571.

Clark, O. E. See McBain, J. W

Clark, P. G. See Wooldridge, H. B. Clark, R. H., and Streight, H. R. L., electrolysis of cyanogen halides, A., 407.

Clark, R. J., loaf volume as produced by different flours under prolonged fermentation, B., 1029.

Clark, W. G. See Weston, E. B. Clark, W. M. See Gibbs, H. D., and Merrill, A. T. Clark Fibre Products Corporation. See Clark, H. H.

Clarke, B. E., manufacture of a chlorinised and ozonised topical remedy, (P.), B., 959.

Clarke, B. L., and Wooten, L. A., application of differential potentiometric titration to the determination of weak acids in dilute solution, A., 1410.

Clarke, E. J. See Alloy Welding Processes, Ltd.

Clarke, H. T., and Dreger, E. E., [preparation of] ammonium hydrogen sulphobenzoate, A., 1068

[preparation of] o-sulphobenzoic anhydride, A., 1068.

Clarke, H. T., and Hartman, W. W., [preparation of] phloroglucinol, A., 1064. Clarke, H. T., Malm, C. J., and Eastman Kodak Co., cellulose

esters containing unsaturated organic acid groups, (P.), B., 203.

esterification of mercerised cellulose with lower aliphatic acids, (P.), B., 513.

cellulose esters containing nitro-groups and halogen-substituted acyl groups, (P.), B., 554.

manufacture of cellulose aceto-esters containing higher acyl groups, and of cellulose esters containing halogen-substituted fatty acid groups, (P.), B., 594.

Clarke, H. T., and Taylor, E. R., [preparation of] o-chlorobenzoyl

chloride, A., 1068. Clarke, H. T., Taylor, E. R., and Eastman Kodak Co., manufacture of 6-ethoxy-2:4-dimethylquinoline, (P.), B., 935.

Clarke, H. T. See also Kodak, Ltd., and Malm, C. J. Clarke, J. B. See Baron, J. T., and Bennion, F.

Clarke, M. F. See Collett, M. E.

Clarke, S. G., solubility of Reinsch antimony films in water,

Clarke, S. G., and Evans, B. S., determination of traces of antimony in copper and its alloys, B., 175.

Clarke, S. G., and Jones, B., colour reaction of copper, A., 900.

Clarkson, G. D., storing and redrying malt, B., 573. Clarkson, T., and Heal, H. R., removing amorphous wax and asphaltic material from [lubricating] oil, (P.), B., 507.

Clarkson, W., spectral phenomena of spark discharges, A., 363. intensities of some Fc+ multiplets in the arc and chromosphere spectra, A., 366

Classen, A., removal of hydrochloric acid from sugar solutions, (P.), B., 449, 618

Clauberg, A. See Levy, P.

Claude, G., and L'Air Liquide Société Anonyme pour l'Étude et l'Exploit. des Procédés G. Claude, purification of coke-oven gases, etc., (P.), B., 670\*.

separation by liquefaction of complex gaseous mixtures, (P.), B., 802\*.

extraction of hydrogen from gaseous mixtures, (P.), B., 978\*. Claude, G., and Lazote, Inc., purification of coke-oven gases, etc., (P.), B., 314\*.

Claus, G., action of fluorescent dyes in the dark on diastase,

Claus, W. [with Briesemeister, S., and Kalaehne, E.], solubility of gases in pure aluminium and in an aluminium alloy, B., 820. Claus, W.  $\hat{D}$ . See Jauncey, G. E. M.

Clavel, (Mme.). See Leulier, A., and Sédallian, P.

Clavel, R., production of metallic effects on fabrics containing organic derivatives of cellulose, (P.), B., 93\*.

treatment of fibres of acetylcellulose to produce wool-like effects, (P.), B., 640\*:

loading and dull-lustring of silk, (P.), B., 774.

loading of silk fabrics, (P.), B., 774, 811.

loading of silk or silk-containing textile material in the form of hanks or runs, (P.), B., 894

manufacture of leather substitutes, (P.), B., 904\*.

Clavera, J. M., and Guevara, D., chlorine index of goat's milk; systems of rapid analysis, B., 374.

Clawson, M. S., alloy for high-speed steel, (P.), B., 1019.

Claxton, G., and Dawson, H. M., miscibility of phenol with aqueous salt solutions, A., 996.

Clay, J., penetrating radiation. II., A., 373.

Clayton, E. E., seed treatment for black-leg disease of crucifers, B., 185.

Clayton, R. H. See Manchester Oxide Co., Ltd. Clayton, W. H. See Auty, C. M.

Clayton Aniline Co., Ltd., and Robinson, R., manufacture of a condensation product of a-naphthylamine and acetaldehyde, and application thereof in the manufacture of vulcanised rubber, (P.), B., 807.

manufacture of vulcanised rubber, (P.), B., 829.

Clayton Installations, Ltd., and Hackford, J. E., fire-extinguishing compound, (P.), B., 702.

Clayton Installations, Ltd., and Muirhead, W. A., [furnace for] generating gaseous oxide of sulphur [for preventing or extin-

guishing fire or for disinfecting], (P.), B., 598. Clayton, Son & Co., Ltd., and Sowden, W., [bituminous] lining or coating of pipes, tubes, etc., (P.), B., 980.

Claytor, R. S. See Williams, W. M.

Clearfield Machine Co. See Reed F. B.

Clément, L. E., and Du Pont-Pathé Film Manufacturing Corporation, solvents for nitrocellulose and for acetylcellulose, (P.), B., 594.

Clement, (Sir) T., and Clement & Sons, Ltd., A., preservation of [sliced] meat [under fat], (P.), B., 909.

Clement & Sons, Ltd., A. See Clement, (Sir) T. Clementi, A., arginasc. VII. Ureotelic character of the nitrogen metabolism of Chelonia, A., 723. Clements, F. H. See McLennan, J. C.

Clements, H. F., plant nutrition studies in relation to the triangular system of water cultures, B., 757.

Clemm, H., and Zellstoff-fabrik Waldhof, filling boilers for cellulose

with sulphite liquors, (P.), B., 51\*.

Clemo, G. R., Haworth, R. D., and Walton, E., constitution of santonin. I. Synthesis of dl-santonous acid, A., 1454.

Clemo, G. R., and Raper, R., the lupin alkaloids. II., A., 1318. Clenshaw, E., and Maclean, I. S., nature of the unsaponifiable fraction of the lipoid matter extracted from green leaves, A., 361.

Clerc, L. P., does fixation reduce the density of the silver deposit? B., 738.

Clerc, R. See Jordan, H.

Clerici, A. See Cambi, L.

Clerici, E., application of isopyknometric analysis to auriferous rocks, A., 536.

Cleveland, L. R., and National Academy of Science, Washington, sterilisation and preservation of fruit juices, (P.), B., 868.

Cleveland-Cliffs Iron Co. See Twining, R. H.

Cleveland Graphite Bronze Co. See Palm, J. V. O. Clibbens, D. A., and Ridge, B. P., tensile strength and fluidity of chemically modified cotton, B., 239.

Clibbens, D. A. See also Birtwell, C.

Clifford, A. M., and Goodyear Tire & Rubber Co., anti-oxidant or age-resister [for rubber], (P.), B., 446.

Clifford, A. M. See also Goodyear Tire & Rubber Co.

Clifford, A. T., and Cameron F. K., solid solutions of lime and arsenic acid, B., 170.

Clifford, W. B., and Clifford Corporation, refining of lubricating oil in hydrocarbon motors, (P.), B., 843.

Clifford Corporation. See Clifford, W. B.

Climax Molybdenum Co., and Kissock, A., ferrous molybdenum alloys, (P.), B., 725. production of molybdenum-bearing iron, (P.), B., 984.

Climax Molybdenum Co., and Smith, J. K., cast-iron alloys, (P.), B., 984.

Clingestein, H. See Grasselli Dyestuff Corp., and Grimmel, H.

Cloer, V. U., selection of cottonseed, (P.), B., 732.

Cloke, J. B., pyrrolines from  $\gamma$ -chloropropyland cyclopropyl ketimines, A., 703.
Close, H. G., and Osman, A. A., variations in some of the con-

stituents of the blood throughout the menstrual cycle in normal women, A., 94.

Closs, J. O. See Kahlenberg, L. Closs, K. See Lunde, G. Cloud, B. M., recovering oil, (P.), B., 466.

Cloud, W. A., grinding, crushing, pulverising, or disintegrating mills, (P.), B., 664.

Clough, L. A. See Underwood, H. W., jun. Clough, W. W. See Buc, H. E. Clough, W. Z. See Holmes, A. D.

Clow, B., and Marlatt, A., antirachitic factor in burbot-liver oil, B., 402.

Clusius, K., specific heats of some condensed gases between 10° Abs. and their triple points, A., 635. vapour-pressure constant of neon, A., 992.

Clusius, K., and Hiller, K., specific heats of para-hydrogen in the solid, liquid, and gaseous states, A., 990.

Clutterbuck, W. H. See Harding Chem. Co., Ltd.

Cluzet, G., micelle changes produced by the addition of crystalloids to serum, A., 951.

Cluzet, G. See also Chanoz, M.

Cluzet, J., and Kofman, photographic effect produced by sterols after exposure to ultra-violet rays, A., 895.

Coad-Pryor, E. A., annealing of glass from the point of view of factory operation, B., 18.

Coal Oil Extraction, Ltd., and Runge, W., film evaporator, (P.), B., 801.

Coal & Oil Products Corporation. See Schwarz, Alfred.

Coats, H. B., and Brown, G. G., vapour-pressure chart for hydrocarbons, A., 387.

Cobb, E. B., Holmes, August, and Standard Oil Development Co., manufacture of white petrolatum, (P.), B., 634.

Cobb, G., bituminous composition for paving, (P.), B., 248. Cobb, J. W. See Dent, F. J.

Cobet, R., lactic acid content of the brain under differing conditions

of respiratory want, A., 1484.

Coblentz, W. IV., Raman spectra of scattered radiation, A., 378.

Coblentz, W. W., and Stair, R., reflecting power of beryllium, chromium, and several other metals, A., 495.

transmissive properties of eye-protective glasses and other substances, B., 55.

Coblentz, W. W., Stair, R., and Schoffstall, C. W., transmission of ultra-violet radiation through various fabrics, B., 48.

Cochius, P. M., and Naamlooze Vennootschap Glasfabr. "Leer-dam" voorheen Jeekel. Miinssan & Co

dam" voorheen Jeekel, Mijnssen, & Co., preparation of vitrified material ["glass-granite"], (P.), B., 816\*.
Cochran, P. B., and Westinghouse Electric & Manufacturing Co.,

heat-responsive material, (P.), B., 78. improving the tensile strength of fabric materials [insulating

tape], (P.), B., 726.

Cocking, T. T., arsenious iodide and its solutions, B., 1030.

Cocking, T. T., and Crews, S. K., petroleum spirit test for purity

of castor oil, B., 861. Cocks, L. V., viscosity of glycerin solutions, B., 1022.

Coe, H. S., and Dorr Co., liquid separator, (P.), B., 498. Coe, H. S. See also Blomfield, A. L.

Coehn, A., evidence of protons in metals, A., 1392.

Coelho, E., and De Oliveira, J. C., effect of ergotamine on alimentary hyperglycemia, A., 1106. Coffey, J. M. See Mica Insulator Co.

Coffey, S. See Imperial Chem. Industries, Ltd. Coffman, D. D. See Carothers, W. H.

Cofman, V., and De Vore, H. B., changes in cellulose nitrate when

exposed to light, A., 154.

Cofman-Nicoresti, J., colloidal iodine preparations in gel form, (P.), B., 1014.

Coghill, R. D., and Bird, O. D., bacteria. XXIV. Timothy-grass bacillus, A., 355.

Coghill, W.H. See De Vaney, F.D.

Cohen, A., and Smiles, S., synthesis of isonaphthathioxin,

Cohen, B., protected reservoir and burette [for solutions affected by oxygen], A., 44. Cohen, B. See also Hall, W. L.

Cohen, E., metastability of matter and our physical "constants," A., 1372.

Cohen, E., and Bredée, H. L., metastability of elements and compounds as a result of enantiotropy or monotropy. XIII. The differential gas dilatometer of C. J. Smith and its accuracy, A., 496.

metastability of elements and compounds as a result of enantio-tropy or monotropy. XIV. Investigation of potassium nitrate by means of the differential gas dilatometer, A., 498.

Cohen, E., and Dobbenburgh, W. J. D. van, metastability of the elements and compounds as a result of enantiotropy or monotropy. A., 22. XI. Physico-chemical constants of silver iodide. I.,

Cohen, E., and Kooy, J., metastability of elements and compounds as a result of enantiotropy or monotropy. XII. Heat of

dissolution. I., A., 509. Cohen, (Miss) E. See McLennan, J. C.

Cohen, F. H., velocities of nitration, A., 272. Cohen, J. B. See Browning, C. H. Cohen, J. H. See Briefer, M.

Cohen, S. J., pharmacology and toxicology of some new organomercury compounds, A., 720.

Cohen, W. D. See Böeseken, J.

Cohen, W. E., karri bark as a source of tannin, B., 1047.

Cohn, A. E., and Mirsky, A. E., physiological ontogeny. A. Chicken embryos. XIV. Hydrogen-ion concentration of the blood of chicken embryos as a function of time, A., 338. Cohn, D. J. See Gordon, M. B.

Cohn, H., influence of positive ions on the electronic space charge within a two-plate system, A., 5.

Coke Reclamation Corporation. See Silverston, A. R.

Colange, G. See Lepape, A.

Colani, A., uranyl formate, A., 1238.

determination of degree of oxidation of some insoluble phosphates, A., 1256.

Colas Products, Ltd., Whiting, W. S., and Terry, A. G., bituminous emulsions and their use in the coating of substances with bitumen, (P.), B., 248.
Colby, O. A., and Westinghouse Electric & Manufacturing Co.,

electric furnaces, (P.), B., 135, 400, 526. rotary-hearth furnace, (P.), B., 154. Colby, W. F., analysis of the hydrogen chloride bands, A., 974.

Colclough, H. See Heath, A. Cole, A. F. W. See Martin, W. H. Cole, A. G. See Hektoen, L.

Cole, D., grinding mill, (P.), B., 452. Cole, P. I. See Hardy, A. C. Cole, S. S., variations in pyrometric cone equivalents of silica cements and fireclays, B., 130.

Cole, S. W., recovery of oil from omulsions, (P.), B., 386.
Cole, V. V., Speer, J. H., and Heyl, F. W., factors influencing calcium balance. I. Influence of potential alkalinity on the utilisation of supplementary calcium lactate in the mature rat, A., 345.

factors influencing calcium balance. II. Influence of potential alkalinity on the utilisation of supplementary calcium lactate

in young rachitic rats, A., 599.

Cole, V. V. See also Speer, J. H.

Cole, W. H., proofing of iron and steel against rust, (P.), B., 287, 781.

removing rust, scale, dirt, or grease from iron and steel articles, (P.), B., 330.

de-rusting of ferrous metals, (P.), B., 649\*.

proofing metal, especially iron and steel, against rust, (P.), B., 726\*.

material for uso in protecting iron and steel, (P.), B., 900\*.

Cole, W. J. See Telegraph Condenser Co., Ltd.
Colella, C., and Napoli, M., composition of flesh of the Italian buffalo, A., 1328.

Coleman, D. A., Rothgeb, B. E., and Fellows, H. C., respiration of sorghum grains, B., 788. Coleman, G. H., and Mullins, G. M., nitrogen trichloride and

unsaturated acids, A., 545.

Coleman, G. H., and Yager, C. B., primary amines from Grignard reagents and chloroamine. II., A., 431.

Coleman, R. L., physical properties of dental materials (gold alloys and accessory materials), B., 175. Coleman, S. P., and Standard Oil Development Co., extraction and

purification of naphthenic acid, (P.), B., 935. Coleman, S. P. See also Standard Oil Development Co.

Coles, H. L., Donaldson, J. G., and Guardian Metals Co., metallic [nickel-tungsten] alloy, (P.), B., 361. composite metal plate, (P.), B., 361.

apparatus for melting and casting, (P.), B., 398. metallic alloy, (P), B., 604.

Coles, H. L. See also Donaldson, J. G.
Coles, H. W., Goodhue, L. D., and Hixon, R. M., structure of  $\beta$ -(para)glucochloralose, A., 429.

Coles, H. W., Manske, R. H. F., and Johnson, T. B., synthesis of ephedrine and structurally similar compounds. III. New synthesis of  $a\beta$ -diketones, A., 1073.

Coley, H. E., reduction of ores, oxides, etc. [of volatile metals, e.g., zino], (P.), B., 361.

manufacture of zinc, (P.), B., 822\*.

Colin, G. G., chemistry, pharmacology, and therapeutics of Agave salmiana, B., 188.

Colin, H., determination of starch by the diastase method, B., 489. Colin, H., and Chaudun, A., action of invertage: free water,

viscosity, and rate of reaction, A., 722. concentration of sugar and rate of hydrolysis in an acid medium, A., 772.

 $p_{\rm H}$  value of sugar media and their power of inversion, B., 33.

Colin, H., and Ricard, P., properties of lamarin from Laminaria,

Colin, H., and Simonet, M., viscous fermentation of frozen [sugar] beet, B., 411.

Colin-Russ, A., vegetable-tanned sole leathers, B., 1025.

determination of fat and water-soluble [matter] in leather. III. Fundamental significance of the retention coefficient, K, B., 1047.

Collaud, C. See Kehrmann, F. Collazo, J. A., Rubino, P., and Varela-Fuentes, B., experimental hypervitaminosis in rats caused by large doses of irradiated ergosterol, A., 476.

Collazo, J. A. See also Rubino, P. Colles, R. M., loss of heat from exposed surfaces, B., 913.

cleaning of blast-furnace gas; the stream-line dry gas filter, B., 981.

Collet, E., manufacture of phosphorus and aluminium, (P.), B., 18. Collett, M. E. and Clarke, M. F., specificity of intracellular dehydrogenases. II. Effect of poisons on dehydrogenase

systems of frog and fish muscle, A., 847.
Collett, M. F., Clarke, M. F., and McGavran, J., specificity of intracellular dehydrogenases. III. Dehydrogenases of frog

muscle, A., 847.

Collier, A.J., Heywood, F., and Imperial Chemical Industries, Ltd., obtaining granular solids [from viscous liquids], (P.), B., 964.

Collin, G., Hilditch, T. P., and Lea, C. H., component glycerides of a mutton tallow, B., 331.

Collin, R., properties of fibres of coagulated gelatin, A., 647.

Collingridge, F., apparatus for the recovery of metals by electrolysis, (P.), B., 781.
Collings, W. A. See Cross, R.
Collins, C. B. See Koppers Co.

Collins, E. H., fine structure of the sharp series triplet,  $2^3P_{0,1,2}$  $2^3S_1$ , of optically-excited mercury radiation, A., 112.

Collins, E. R. See Clark, N. A.

Collins, G. W., and Stasiak, A., comparative chemical examination of different brands of acriflavine hydrochloride (acriflavine) and acriflavine base ("neutral" acriflavine), B., 910.
Collins, H., minerals. V.—XII., A., 169, 674.
Collins, H. J., agitating or mixing liquids, slimes, etc., (P.),

B., 389.

causing solids to be penetrated by or impregnated with liquids or solutions of various substances, (P.), B., 839.

Collins, H. N. W. See Arthus, M.

Collins, S. C., and Cameron, F. K., lithium chloride-ammonia complexes, A., 30.

Collins, W. D., Farr, H. V., Rosin, J., Spencer, G. C. and Wichers, E., recommended specifications for analytical reagent chemicals, A., 1157.

Collinson, D. L., Hume, E. M., Maclean, I. S., and Smith, H. H., nature of the vitamin-A constituent of green leaves, A., 1202.

Collinson, G. A. See Channon, H. J.

Collip, J. B., non-specific pressor principle of tissues, A., 208. Collip, J. P., non-specific pressor substance, A., 462. Collip, J. P., and Sandin, R., isolation of methylhydantoin from extract of ox testes, A., 462.

Collis Co. See Bouda, B.

Colloidal Equipment Corporation. See Cunniff, B.

Colloidal Lime Plaster Corporation. See Loomis, C. C.

Colomb, H., spinning nozzles for manufacture of artificial silk, (P.), B., 848.

Colombier, M. L., volumetric determination of mercury, A., 1032.

Colonius, H. See Ziegler, K. Colony, W. M., and Petroleum Conversion Corporation, conversion [cracking] of hydrocarbons, (P.), B., 882.

Colour Photographs (British & Foreign), Ltd. See Becker, W. T. L.

Columba, G. See Cristaldi, G. G.

Columbia Steel Co. See Naugle, H.M.

Comanescu, V. N. See Angeleseu, E. Comay, S. See Faragher, W. F.

Combined Metals Reduction Co. See Green, W. D., and Snyder, E. H.

Combustion Equipment Co. See Atwater, H. A.

Combustion Utilities Corporation. See Caplan, S., Klees, A. L., and Wright, C. J.

Comel, M., oxygen absorption curve of fatigued muscle as a function of hydrogen-ion concentration, A., 598.

Comerford, J. S. See Hall, J. H.

Comey Brooklyn Co., R. N. See Grier, H. E.

Commercial Pigments Corporation. See Blumenfeld, J., and De Rohden, C.

Commercial Solvents Corporation, Woodruff, J. C., and Bloomfield, G., catalytic production of methyl alcohol, (P.), B., 47.

Commercial Solvents Corporation. See also Arsem, Bannister, W. I., Bogin, C., Reilly, J., and Woodruff, J. C.

Commons, C. H. See Andrews, A. I. Compagnie de l'Azote et des Fertilisants, S.A., manufacture of thiocarbamide from cyanamides, (P.), B., 200.

[production of phosphatic] fertilisers, (P.), B., 572.

Compagnie Générale des Conduites d'Eau, Société Anonyme. Seo Doat, H.

Compagnie Générale de Distillation et Cokefaction à Basse Temperature et Minière "Holcobami" Société Anonyme and Internationale Holding de Distillation et Cokefaction à Basse Temperature et Minière "Holcobami" Société Anonyme, retort ovens for low-temperature carbonisation, (P.), B., 841.

Compagnie Générale d'Electricité. Sec Anode Rubber Co. (England), Ltd.

Compagnie Générale des Industries Textiles. See Duhamel, E. C.Compagnie Internationale pour la Fabrication dos Essences et Pétroles, apparatus for hot purification [desulphurisation] of gases, (P.), B., 842.

catalytic cracking of petroleum oils, tar, etc., (P.), B., 970. manufacture of light hydrocarbons by catalytic cracking of petroleum oils, tars, or other similar starting materials, (P.), B., 970.

Compagnie Internationale pour la Fabrication des Essences et Pétroles (Société Internationale des Procédés Prudhomme-Houdry), purification of gases in continuous working of plants for manufacture of light hydrocarbons, (P.), B., 769.

Compagnie Lorraine de Charbons pour l'Electricité, manufacture of arc lamp electrodes, (P.), B., 606.

treatment of lamp blacks and other carbon blacks and their industrial applications, (P.), B., 631.

arc lamp electrodes for heavy currents, (P.), B., 688.

Compagnie des Métaux Overpelt-Lommel, apparatus for roasting and sintering ores, etc., (P.), B., 287.

Compagnie des Mines de Bruay. See Soulary, P.

Compagnie Nationale de Matières Colorantes et Manufactures de Prodnits Chimiques du Nord Réuniés, Établissements Kuhlmann, manufacture of a new diazo-compound and of new [wool] dyes therefrom, (P.), B., 124. manufacture of a new diazo-compound and of new dyes there-

from, (P.), B., 165.

manufacturo of halogenated organic compounds, (P.), B.,

production of hydrogen mixed with carbon monoxide and nitrogen from coke-oven gas, (P.), B., 587.

wetting, cleansing, and emulsifying agents, (P.), B., 716. treatment of textile fibres of cellulosic or other composition, (P.), B., 848.

Compagnie Olivier. See Michand, M. D. C.

Compagnie de Produits Chimiques et Electrométallurgiques Alais, Froges & Camargue, herbicidal [and fireproofing] products, (P.), B., 448.

Compagnie Réunies des Glaces et Verres Spéciaux du Nord de la France, manufacture of plate glass, (P.), B., 474.

Compagnie Réunies des Glaces et Verres Spéciaux du Nord de la France, and Hermansen, A., crucible process for manufacture of plate glass, (P.), B., 474.

Compagnie des Surchauffeurs Société Anonyme, heat exchangers, (P.), B., 739.

Compain, J. D., continuous filter, (P.), B., 627. Compton, K. T., and Boyce, J. C., arc spectrum of nitrogen in the extreme ultra-violet, A., 365.

extreme ultra-violet spectra excited by controlled electron

impacts, A., 1359.

Compton, K. T. See also Boyce, J. C. and Van Voorhis, C. C. Comrie, A. A. D., nitrogen requirements of yeast, B., 1028.

Comstock, G. L., and Firth-Sterling Steel Co., alloy steel, (P.), B., 562

Comstock & Wescott, Inc. See Wescott, E. W.

Comyn, B. D., apparatus for separating liquids, (P.), B., 420.

Conant, J. B., and Blatt, A. H., action of Grignard reagent on highly-branched carbonyl compounds, A., 675.

Conant, J. B., and Evans, M. W., dissociation into free radicals of substituted dixanthyls. V. Rate of dissociation, A., 934.

Conant, J. B., Webb, C. N., and Mendum, W. C., trimethyl- and dimethylethyl-acetaldehydos, A., 680.

Conant, J. B. See also Bridgman, P. W.

Conant, L. B., and Standard Patent Process Corporation, vulcanising rubbor to leather, (P.), B., 729\*.

Concordia Berghau-Akt.-Ges., Bronn, J. I., and Fischer, G., separation of by-products and of other secondary constituents from coke-oven gases and from other gas mixtures, (P.),

Concordia Bergbau-Akt.-Ges. See also Bronn, J. I.

Condon, E. U., nuclear motions associated with electron transitions in diatomic molecules, A., 235.

Condon, E. U., and Smyth, H. D., critical potentials of molecular hydrogen, A., 120.

Condon, E. U. See also Gurney, R. W.

Condorelli, P., rapid detection of extract of Atractylis gummifera in liquorice extract, B., 148.

Condrup, C. O., and Spiers, H. M., effect of distillation conditions on the consistency of road tars, B., 583. Cone, C. N., Davidson, G., Laucks, I. F., and Laucks, Inc., I. F.,

manufacture of water-resistant adhesives, (P.), B., 904.

Cone, M. R., and Union Trust Co., bituminous product, (P.), B., 424.

Coniglio, L., dehydration of 3CdSO<sub>4</sub>,8H<sub>2</sub>O, A., 279.

Conlan, M., preparation and spinning of fibrous materials for production of yarns, (P.), B., 280.

Conley, J. E. See Marden, J. W. Conlin, J. J. See Brit. Thomson-Houston Co., Ltd.

Conn, H. J., Loeffler's methylene-blue, A., 357.

microscopic method of studying bacteria in soil, B., 142.

a typo of bacteria abundant in productive soils, but apparently lacking in certain soils of low productivity, B., 185. Connell, G. P. Sce Rosewarne, P. V.

Connell, K., composition for the rapeutic uses, (P.), B., 417.

Connell, L. H. See Schoepfle, C. S.

See Washington, D. E. Connell, W. B.

Connitt, G. H. See Bogert, M. T.

Connolly, G. C. See Silica Gel Corp.

Connor, C. A. See Smith, J. H. Conod, G., and Lecoultre, F. C. F., manufacture of artificial stone of crystalline structure, (P.), B., 174.

Conover, F. S., practical method for obtaining dry air for humidity control in a rubber laboratory, B., 256.

Conrad, J. See Auwers, K. von, and Wittig, G.

Conservo Co. See McClave, J. M.

Consolidation Coal Products Co. 'See McIntire, C. V.

Consortium für Elektrochemische Industrie G.m.b.H., manufacture of carboxylic acid anhydrides, (P.), B., 122. manufacture of acetic anhydride, (P.), B., 235.

manufacture of butyl alcohol and other organic compounds from ethyl alcohol, (P.), B., 426.

manufacture of esters of vinyl alcohol, (P.), B., 635.

Consortium für Elektrochemische Industrie G.m.b.H., Haehnel, W., and Herrmann, W. O., manufacture of benzone- and spiritsoluble polymerisation products of vinyl acetate, and of lacquers therefrom, (P.), B., 28.

Consortium für Elektrochemische Industrie G.m.b.H., Herrmann, W. O., and Deutsch, H., manufacture of esters [from vinyl acetate], (P.), B., 708.

Consortium für Elektrochemische Industrie. Sec also Herrmann, W. O., and Mugdan, M.

Constable, F. H., higher hydrocarbons from methane, A., 46.

invisible oxide films on metals, A., 503.

kinetics of the hydrogenation of ethylene using a copper catalyst of measurable surface, A., 520.

Constant, E., and Constant, L., (Soc. E. & L. Constant), dyeing machine with pivoting vat, (P.), B., 679.

Constant, L. See Constant, E.

Constant, L. W., magnetic properties of isolated atoms of cobalt, A., 871.

Consumers Tobacco Co. See Mewborne, R. G.

Contact Filtration Co. See Black, J. C., and Chappell, M. L. Continental-Caoutchouc & Gutta-Percha Co., colouring of rubber with lipoid-soluble dyes, (P.), B., 257.

Continental-Diamond Fibre Co. See Landt, G. E.

Continental Oil Co. See Naylor, L. W.

Continentale Akt.-Ges. für Chemie, and Illoch, A., sizing of paper, (P.), B., 554.

Continuous Coal Carbonisation, Ltd., Winzer, C. B., and Nisbet, R., carbonisation of coal and other solid carbonaccous sub-

stances, (P)., B., 705.

Conzetti, A. See Ferrero, P.

Cook, C. H., and Servel, Ltd., refrigerating plants, (P.), B., 155. Cook, J. T., and Haffenreffer, A. F., method of combustion, (P.), B., 586.

Cook, O. W., and Eastman Kodak Co., composition for joining strips of motion-picture films, (P.), B., 74.

Cook, R. G. See La Mer, V. K. Cook, R. L., mixer, (P.), B., 497.

Cook, R. P., and Stephenson, M., bacterial oxidations by molecular oxygen. I. Aërobic oxidation of dextrose and its fermentation products in relation to the viability of the organism, A., 101.

Cook, S. F., structure and composition of hæmosiderin, A., 952.

Cook, S. G., surface tension of mercury in the presence of gas under varying pressures, A., 1130.

Cook, W. R. See Hassé, H. R.

Cooke, E. A., and Swallow, J. C., automatic regulation of temperatures up to 600° by means of a platinum resistance regulator, A., 1416.

Cooke, F., manufacture of coal tar, (P.), B., 120. Cooke, J. J. See South Metropolitan Gas Co.

Cooke, T. C., gyratory crusher, (P.), B., 458. Cooke, T. H., Kreis reaction for detection of incipient rancidity in cacao butter, B., 697.

Cooksey, T., and Walton, S. G., electrolytic determination of lead in urine, A., 470.

Coolbaugh, M. F., and Read, J. B., treatment of sulphur-bearing minerals, (P.), B., 719\*.
Coolbaugh, M. F. See also Read, J. B

Coolhaas, C., dissimilation of salts of fatty acids and carbohydrates by thermophilic bacteria, A., 473. Coolidge, C. See Du Pont de Nemours & Co., E. I

Cooper, C., Henshaw, D. M., and Holmes & Co., W. C., treatment of gases arising in the distillation or carbonisation of coal and like carboniferous material, (P.), B., 232.

Cooper, C. J., and Mason, A. M. (Cooper & Co., C. J.), grinding or crushing mill, (P.), B., 497.

Cooper, D., and Langstroth, G. O., specific heat of molybdenum from 250° to -40°, A., 386.

Cooper, D. B., crushing machines, (P.), B., 229.

Cooper, D. Le B., oxygen-compound formation with acetaldehyde at low temperature, A., 296.

Cooper, E. A., and Haines, R. B., chemical action of quinones on proteins and amino-acids. II., A., 356. bactericidal action of nitroso-compounds, A., 356.

Cooper, E. A., and Nicholas, S. D., dissolved oxygen absorption test. III., B., 190.

Cooper, E. A. See also Cheeseworth, H. D.

Cooper, G. See Tetley & Son, Ltd., J

Cooper, H. S., and Kemet Laboratories Co., Inc., production of high vacua, (P.), B., 801. preparation of thorium alloys, (P.), B., 1020\*.

Cooper, H. S. See also Price, R. C

Cooper, J. R., effect of commercial fertilisers on the performance of apple trees, B., 336.

Cooper, K. E. See Hodgson, H. H.

Cooper, P., refractory formers for electric heating elements; their manufacture and use, B., 816.

Cooper, R. A., and Watson, F. W., development of the chlorine process of extraction of platinum metals from ores, B., 602. Cooper, W. C., jun., and Blinks, L. R., cell-sap of Valonia and

Halicystis, A., 360.

Cooper, W. C. jun., Dorcas, M. J., and Osterhout, W. J. V., penetration of strong electrolytes [into plant cells], A., 360. Cooper & Co., C.J. See Cooper, C.J.

Coops, J., jun. See Verkade, P. E. Cope, F. T., and Electric Furnace Co., electric furnace, (P.), B., 24. annealing furnace, (P.), B., 213. Cope, W. H. See Somerville, A. A.

Copeland, L. C., active form of oxygen, A., 1401.

Copeman, P. R. v.d.R., distribution of nitrogen in some fruits, A., 1346.

Coper, K. See Zocher, H.

Copertini, S. See Vecchiotti, L. Copisarow, M., mineral trees: their formation and significance, A., 258.

2-substituted derivatives of p-cresol, A., 439. salicylaldehyde and its methyl ether, A., 559.

Copland, H., and Copland, J., detergents, (P.), B., 988. Copland, J. See Copland, H. Coplans, M., preparation of stable medicinal salts of acetyl salicylic acid, (P.), B., 835.

Copley, I. C. See Evans, O. B.

Coppée & Cie., E., coke oven, (P.), B., 86. coal-washing apparatus, (P.), B., 235.

Copper Deoxidation Corporation, and Stout, H. H., coalescing copper, (P.), B., 60.

Copping, A. M., effect of "bios" on the growth and metabolism

of certain yeasts, A., 1491.

Corbellini, A., and Debenedetti, E., derivatives of 1:1'-dinaphthyl, A., 1172.

Corbellini, A., and Vietti, F., dinaphthylene dioxide. I., A., 193. Corbet, A. S., natural coagulation of Hevea latex, B., 990.

Corbino, O. M., diagram of quantum states and the formation of the elements in the periodic system, A., 621.

Corbould, W. H., hydrometallurgically treating material containing lead and zinc values, (P.), B., 400\*.

Cordero, N. Seo Adair, G. S.

Cordes, W. A. See Hunziker, O. F.

Cordes Akt.-Ges., C., and Stuhlmann, P., bleaching and hardening of resins, (P.), B., 826.

Cordier, P., hydroxydialkylsuccinic anhydrides, A., 1273. Corell, M. See Grasselli Dyestuff Corporation.

Corey, R. B. See Wyckoff, R. W. G.

Cori, C. F., and Cori, G. T., hepatic glycogen formation from dand l-lactic acid, A., 467.

carbohydrate balance of fasting rats after insulin and adrenaline injections, A., 609.

carbohydrate metabolism of tumours. III. Rate of glycolysis of tumour tissue in the living animal, A., 1193.

influence of adrenaline on blood-sugar utilisation of functionally hepatectomised rats, A., 1494.

Cori, G. T. See Cori, C. F. Corl, C. S. See Gnadinger, C. B.

Corley, R. C., metabolism of lævulose; determination in blood and urine, A., 347.

metabolism of lactose. IV. Fate of lactose in the rabbit,

amino-acid eatabolism. II. Fate of  $\beta$ -alanine and of  $\epsilon$ -aminohexoic acid in the phloridzinised dog, A., 598.

pentose metabolism. III. Rates of disposal of d- and l-arabinose in the rabbit, A., 844.

Corley, R. C., and Marvel, C. S., amino-acid catabolism. III. Fate of ω-hydroxy-derivatives of propionic, butyric, valeric, and hexoic acids in the phloridzinised dog, A., 719.

Corn Products Refining Co., purification of sugar, (P.), B., 144. high-purity crystalline dextrose and its manufacture, (P.), B., 224.

manufacture of starch, (P.), B., 260.
Cornec, E., and Krombach, H., equilibria between water and the nitrates and sulphates of sodium [and potassium] at 50-90°,

ternary system water-sodium nitrate-potassium nitrate, A., 510.

equilibrium between water and the nitrate and chlorides of sodium and potassium, A., 1388.

equilibrium between water and the nitrates, chlorides, and sulphates of sodium and potassium at 75°, A., 1388.

Cornec, E., Krombach, H., and Spack, A., equilibria between water, the nitrates, and the sulphates of sodium and of potassium, A., 767.

Cornec, E., and Neumeister, A., system sodium nitrate-sodium chloride-potassium perchlorate-water from 0° to 100°, A., 650.

system potassium perchlorate-sodium chloride-water from 0° to 100°, A., 650.

ternary system potassium perchlorate-sodium nitrate-water from 0° to 100°, A., 650.

Cornec, E. See also Chrétien, A. Cornelius, C. E., electrical [resistance] furnace for production or fusion of silicates, e.g., glass, (P.), B., 526.

Cornelius, G. See Flodin, N. Cornelius, H. G. E. See Flodin, H. G., and Gustafson, E. G. T. Cornell, E. F., carbazylic acids: ammonia analogues of carboxylic acids, A., 173.

Corning Glass Works, and Fulcher, G. S., casting refractory articles, (P.), B., 852.

Corning Glass Works, and Taylor, W. C., compound glass sheet and its production, (P.), B., 96.

Corning Glass Works. See also Littleton, J. T., jun. and Taylor,

Cornish, R. E., use of Hildebrand hydrogen electrode in biological solutions, A., 362.

Cornish, R. E., and Eastman, E. D., tube correction in measurements of the velocity of sound in gases, A., 253, 387.
Cornog, I., study of the energy relations in the helium spectrum,

A., 111.

Cornog, I., Lay, J. T., and Bazzoni, C. B., intensity variation at critical points in the helium spectrum, A., 1350.

Cornubert, R., and Borrel, C., anomalies of condensation and ring-formation, A., 557. the keto-group, A., 560.

Corran, R. F., influence of various substances on lipase action, A., 603.

Correa, L. M. See Roffo, A. H.

Correll, A., and Zeche M. Stinnes, separation of low-temperature

tar into phenols and hydrocarbons, (P.), B., 466\*.
Corsalli, F. W., refining or purifying metals and alloys, (P.), B., 251.

Corson, B. B., and McAllister, R. W., oxidation of benzoins to diketones with iodine, A., 1301.
Corson, B. B., Scott, R. W., and Vose, C. E., [preparation of]

cyanoacetamide, A., 1049.

Corson, B. B., Thomas, J. S., and Waugh, D. D., esters of aa-dimethylbutyric acid, A., 910.

Corson, M. G., [copper-]nickel alloys, (P.), B., 923.

Corson, M. G., and Electro Metallurgical Co., alloy for electrical conductors, (P.), B., 822.

eopper-cobalt alloy, (P.), B., 900.

[copper-silicon] alloy and method of working and heat-treating the same, (P.), B., 901\*.

Cortassa, S., thermal water of the military station at Acqui, A., 1263.

Cortese, D., composition of Italian beeswax, B., 179.

viscosity of egg albumin and the changes it undergoes in fresh and preserved eggs, B., 795.

Cortese, F., aliphatic diolefines. I. Behaviour of ⊿achexadiene towards sulphuric acid, A., 537.

determination of unsaturation with potassium bromidebromate mixture, A., 789. aliphatic diolefines. II. Preparation and physical constants

of das-hexadiene, A., 1037.

Cortese, F. See also McCullough, R. Cory, M. M. See Perl, J.

Cossman, H. See Lewis, M. R.

Costa, D., [with Cannella, C., and Trost, F.], determination of the volatile acidity of wines, B., 656.

Costeanu, G. I., cells of molten electrolyte; cell: copper oxidemolten sodium hydroxide-zinc, A., 885.
Coster, D., Nitta, I., and Thijssen, W. J., fine structure of the

normal scattered molybdenum Ka-radiation from graphite, A., 630

Raman effect for X-rays, A., 985.

Coster, D, and Wolf, M, fine structure of X-ray absorption edges, A., 1355.

Cotoni, L., and Chambrin, N., pneumococcal hamolysin, A., 355. Cotte, G., and Pallot, G., ovarian hormone; influence of the corpus luteum on the sexual cycle, A., 609.

Cotton, A., action of polarised light on photographic plates prepared from colloidal silver, A., 1405.

asymmetric synthesis and the combined action of polarised light and a magnetic field on certain photographic plates, A., 1405.

Cottrell, C. L., effect of chemical combination on the absorption of X-rays at wave-lengths on each side of the K discontinuity, A., 985

Couerbe, E., clarification of wine by potassium ferrocyanide, B., 793.

Coughlin, J. M., and Scale Solvent and Products Co., [boiler] scale solvent and scaling composition, (P.), B., 624.

Coulhon, A. J., manufacture of ceramic products. (P.), B., 130. Coulier, S., manufacture of alkali cyanides, (P.), B., 55\*. Coulier, S. See also Goldschmidt, R. B.

Coulson, E. A. See Morgan, G. T.

Coulter, C. B., and Isaacs, M. L., oxidation-reduction equilibria in biological systems. II. Potentials of aërobic cultures of Bacillus typhosus, A., 1200.

Cournot, J., cementation of steels by special manganese alloys, B., 213\*.

method of testing opacity of protective [metal] coatings against corrosion, B., 360.

influence of the dimension of the test pieces in viscosity tests of metallurgical products, B., 398.

Cournot, J., viscosity [of aluminium and its alloys], B., 722. protection of aluminium and light alloys against corrosion by

sea-water by electrolytic deposits of cadmium, B., 779. Cournot, J., and Bary, J., protection of light metals and alloys against sea-water corrosion by means of electrolytic deposits, B., 721.

Cournot, J., and Perot, E., cementation of light and ultra-light alloys as a protection against sea-water corrosion, B., 722. corrosion of light and ultra-light alloys; "cementation" [plating] of light and ultra-light alloys as a protection against sca-water corrosion, B., 779.

Cournot, J., and Roux, A., value of X-ray examination in discovering fissures or inclusions in light alloys, B., 780.

Cournot, J. See also Roux, A.

Courtaulds, Ltd., Adcock, F., Baguley, N. G., and Wilson, D. L., manufacture of anhydrous sodium acetate, (P.), B., 642.

Courtaulds, Ltd., and Diamond, C., treatment of threads, films, etc. of cellulose esters, (P.), B., 893. Courtaulds, Ltd., Hazeley, E., and Morton, E. A., manufacture of

artificial threads, filaments, ribbon, etc., (P.), B., 280.

Courtaulds, Ltd., Hegan, H. J., and Hazeley, E., production of artificial threads and the like from viscose, (P.), B., 893.

Courtaulds, Ltd., and Morton, E. A., manufacture of artificial threads, filaments, etc., (P.), B., 513.

Courtaulds, Ltd., Whittaker, C. M., and Harrison, T. M., dyeing

of artificial [regenerated cellulose] silk, (P.), B., 716.

Courth, H. Soe Pfeiffer, G.

Courtney, A. M., Tisdall, F. F., and Brown, A., calcium and phosphorus concentration in the intestinal contents of rats in relation to rickets, A., 1193.

Courtney, A. M. See also Boyd, G. L.

Courtney, W. D., dehydration apparatus, A., 362.

Courtois, A., low cholesterol content of fatty substances of the chrysalides of Lepidoptera, A., 462.

Courtot, C., the  $\pi$  of sulphonation, B., 707. Courtot, C., and Pierron, J., chlorides of a-ethylenic alcohols, A., 796.

exidation of organic halogen compounds, A., 802.

Cousen, A., and Turner, W. E. S., density of boric oxide glass and atomic weight of boron, A., 22.

Cousin, A., repair of blast furnaces without drawing the fire, B., 817.

Cousin, A.J. F.J., and Société Anonyme J. Cockerill, reduction

of metallic oxides, (P.), B., 649\* Cousins, W. R., spectroscopic and chemical investigation of the phenomena at the boundary of an aqueous electrolyte and a gas space on the passage of a discharge, A., 1146.

Coustal, R., permanent luminescence of certain uranium salts, A., 120

phosphorometer for the rapid measurements of the intensities of phosphorescences, A., 240.

Coustal, R., and Prevet, F., preparation of phosphorescent zinc

sulphide, A., 524. Coutts, J. R. H., "single value" soil properties: significance of

certain soil constants. II. Natal soils, B., 486.
Couturaud, P. E. J. J. See Laboratoire de Perfectionnements Thermiques.

Couture, E. See Hugounenq, L. Couture, M., modification of Thomson's mixture for determining the calorific value of coal, B., 117.

errors in the determination of humus in soil, B., 570.

Covello, M. [with Palma, S.], diphthalimidobenzoquinones, A., 318.

Covello, M. [with Scatola, P. L.], action of phthalic anhydride on triaminoresorcinol, A., 313.

Cowan, H. W., drying of paper or other material, (P.), B., 267. Cowan, J. G. See Hancock, W. C. Coward, H. F., explosibility of atmospheres behind [mine]

stoppings, B., 661.
"water-gas" equilibrium in higher-limit methane-oxygen-

nitrogen flames, B., 966.

Coward, H. F., and Wheeler, R. V., ignition of firedamp, B.,

Coward, K. H., amounts of the antirachitic vitamin in different samples of cod-liver oil, milk, and butter, B., 442.

Coward, K. H., and Cambden, M. influence of changes in body-weight of the test rats on the accuracy of the assay of vitamin-D by means of the line test, A., 727

Coward, K. H., Key, K. M., and Morgan, B. G. E., existence of a further factor necessary for growth of the rat, A., 1203.

Coward, K. H., Key, K. M., Morgan, B. G. E., and Cambden, M., influence of different samples of "casein" on vitamin tests,

Cowardin, H. A. See Marion Steam Shovel Co.

Cowardin, S. P. See Marion Steam Shovel Co. Cowdrey, G. W. See Fairbourne, A. Cowie, G. A., potassium fertilisation of fruit trees, B., 906.

Cowles, H. C., jun. See Ferris, S. W.

Cowles Engineering Corporation, centrifugal drying machines, (P.), B., 79.

Cowlishaw, S. D. See Steele, G.

Cowper, A. D., and Williams, J. F., volume-yield and density of lime putty, B., 1017.

Cowper-Coles, S. O., electrodeposition of rubber, (P.), B., 181. Cowper-Coles, S. O., Taylor, L., Gould, A. A., and Lucas, P. G., sherardising [iron and steel], (P.), B., 523.

Cowperthwaite, I. A. See MacInnes, D. A.

Cox, C. B. See Finnemore, H.

Cox, E. R., and Cushman, D. A., process of combined absorption and fractionation for recovering gasoline from gas, (P.), B., 196

Cox, G. J., King, Harriette, and Berg, C. P., preparation of lysine, histidine, and arginine from hydrolysed blood-corpuscles by electrical transport, A., 686

Cox, G. J., Smythe, C. V., and Fishback, C. F., nephropathogenio action of cystine, A., 720.

Cox, G. J. See also Eagles, B. A.

Cox, H. E., and Torrance, J. R., roller mills for grinding, (P.), B., 452.

Cox, H. L., pressure regulator for vacuum distillations, A., 418.

Cox, H. L. See also Gough, H. J.

Cox, J. B., ovens for baking, roasting, and drying purposes, (P.), В., 659.

Cox, J. L., steel alloy, (P.), B., 562. Cox, J. W., Metcall, G. R., and Walker, E. E., furnacc, (P.), B., 837.

Cox, K., and McDermott, P. J., purification of benzol, petrol, etc.,

(P.), B., 198.
Cox, P. E., kilns, furnaces, bodies, and glazes for small commercial production and educational work, B., 55.

Cox, W. M., jun. See Bills, C. E. Coxon, G. H. See Beale, E. S. L. Coyle, F. B. See Internat. Nickel Co.

Coyne, B. B. See Bogert, M. T.

Coyne, F. P. See Barger, G.

Crabtree, H. G., carbohydrate metabolism of tumours, A., 840. Crabtree, J. A., and Dolphon, J. R., manufacture of moulded articles such as switch bases, fuse holders, etc., (P.), B., 291.

Crabtree, J. I. See Ross, J. F.

Cramer, K. See Reissert, A. Craggs, J. W. See Bowran & Co., Ltd., R. Crago, C. H., and Hamilton, A. E., centrifugal-type dust separators, (P.), B., 307.

Craig, D. N. Sec Vosburgh, W. C.

Craig, N., and Lincoln, R., availability of potash in a typical Mauritius soil, B., 487

Craig, O., and Riley Stoker Corporation, pulverising apparatus, (P.), B., 545\*.
Craig, O. See also Riley Stoker Corp.
Craig, T. J. I. Sec Ormandy, W. R., and Spence & Sons, Ltd., P.

Craik, J., cellulose nitrates, B., 417. Craik, J. See also Miles, F. D.

Cramer, G. A., manufacture of motor fuels, (P.), B., 589.

Cramer, T. M., and Pacific Coast Borax Co., production of commercial borax from rasorite by a wet method, (P.), B., 17.

Cramond, G. A. See Macdonald, J. L. A. Crandall, F. K. See Hartwell, B. L.

Crandall, L. A., elimination of thiocyanate, a source of error in the ferric chloride test for lactic acid, A., 209.

Crandall, L. A., Oldberg, E., and Ivy, A. C., physiology of the pancreas. IV. Elimination of dyes in the external secretion of the pancreas, A., 953.

Crandall, W. R. See Thurmann, B. H.

Crane, P. W. See Lange, E.

Cranfield, H. T., influence of feeding on the composition of milk, B., 487.

Cranfield, H. T., and Ling, E. R., variations in the composition of the milk of an abnormal cow, A., 1099.

Cranor, D. F., nature, manufacture, and use of stearic acid, B., 825.

Cranston, J. A., and Stockdale, (Miss) J., determination and control of acidity in the crystallisation of ammonium sulphate, B., 430.

Cranston, W. M., low-temperature carbonisation of coal, (P.), B., 505.

Crapo, F. M., and Indiana Steel & Wire Co., manufacture of protected metal, (P.), B., 900.

Crasemann, E., formation of acid and alcohol in fruit residues and its significance in the nutrition of utility animals, B., 621.

Crassons, J., and Benabeng, H., magnesite, dolomite, or lime bricks, (P.), B., 130.
Crater, W., de C., vapour pressures of glycerol trinitrate and

certain glycol dinitrates, B., 699.

Cravath, A. M., rate of formation of negative ions by electron attachment, A., 619.

relation between the variations with temperature and density of the coefficient of recombination of gas ions, A., 1358.

Craven, E. C. See Ormandy, W. R.
Crawford, A. See Lander, C. H.
Crawford, F. H., Zeeman effect in the Angström carbon monoxide bands. II., A., 489.

Crawford, M. F. See McLennan, J. C. Crawford, R. M., desulphurisation of gas, (P.), B., 842. Crawshaw, B. P. See Imperial Chem. Industries, Ltd.

Cream Processes, Inc. See Rushton, A. L.

Creedon, T. V. See Reilly, J.

Creighton, E. M. See Stevens, T. S.

Creighton, H. J., and Atlas Powder Co., electrolysis reduction cell; apparatus for carrying out electrolytic reduction of sugars to alcohols, (P.), B., 563.

Cremer, W., inhibition of ferrocysteine catalysis by carbon monoxide, A., 337.

reactions of carbon monoxide with metallic compounds of

cysteine, A., 686.
Crennell, J. T., and Milligan, A. G., behaviour and effects of chlorine as an impurity in the lead accumulator, B., 400.

effect of copper as an impurity in the lead accumulator, B., 400. Crépin, A. See Echevin, R.

Crespi, M., adsorption of gases by glass surfaces, A., 639.

Cresson-Morris Co. See Morris, A. S.

Cresswick, J. A. See Porter, A. B. Cretcher, L. H. See Butler, C. L., and Nelson, W. L.

Crew, H., influence of a hydrogen atmosphere on the arc spectra of certain metals, A., 366.

Crew, W. H., and Dawson, L. H., spectra of mercury at atmospheric pressure, A., 1.

Crew, W. H. See also Dawson, L. H. Crews, S. K. See Cocking, T. T. Criep, L. H., and McElroy, W. S., atopy: blood-calcium and gastric analysis, A., 209.

Crilly, R., apparatus for dehydrating tar, (P.), B., 87.

Crippa, G. B., formation of the quinoxaline nucleus, A., 1083. Crippa, G. B. [with Faini, G.], thiocarbamido-derivatives in the

azo-series, A., 181. Crippa, G. B. [with Vicini, F., Levi, G., and Mangano, A.] metallic complexes [co-ordination compounds] of o-amino- and

o-hydroxyazo-derivatives, A., 181. Crippa, G. B., and Galimberti, P., action of phthalic anhydride on aminoazo-derivatives, A., 181.

diphthalimidonaphthalenes and benzoylenenaphthaminazoles, A., 1315.

Crippa, G. B., and Gallotti, M., action of activated hydrogen and nitrogen on carbon monoxide, A., 1286.

Crist, J. W., and Dye, M., relation of vitamin-A to greenness of plant tissue. II. Vitamin-M content of asparagus, A., 610. Crist, J. W. See also Dye, M.

Crist, R. H., ultra-violet transmission of a new window-glass

substitute, B., 95. Crist, W. L. See Howard, R. C.

Cristaldi, G. G., and Columba, G., constitution of the augite of Monti Rossi (Etna), A., 788.

Cristol, P., deproteinisation of blood for determination of total nonprotein nitrogen and the index of polypeptidæmia, A., 461. determination of the alkaline reserve of blood-plasma and determination of acetoacetic acid in blood, A., 1095.

Crites, J., and Raymond Bros. Impact Pulverizer Co., pulverising

mill, (P.), B., 497.

Crockatt, W. C., and Crockatt & Sons, Ltd., W., indicating the presence of saline, alkaline, acid, or other impurities in water or other fluids, (P.), B., 874.

Crockatt & Sons, Ltd., W. See Crockatt, W. C.

Crockford, H. D. See Cameron, F. K.
Crössmann, F. See Ziegler, K.
Croft, C. M., "C.O.L." chamber ovens at the works of the Wandsworth, Wimbledon, and Epsom District Gas Co., B., 763.

Crofts, E., basal and resting metabolism after irradiation with ultra-violet light. I. Resting metabolism of birds. II. Basal metabolism of man. III. Resting metabolism of rabbits, A., 1103.

Cromlech Tile Co. See Broad, W. R. Crommelin, C. A. See Mathias, E. Crone, A. S. D., screening or sifting devices, (P.), B., 740.

Crooker, H. LeR., chemical heat storage, (P.), B., 419.

Crop Protection Institution. See Hartzell, A. Crosfield & Sons, Ltd., J. See Newall, H.

Cross, E. G. Sec Underhill, F. P.

Cross, H. C. See French, H. J.

Cross, R., Collings, W. A., and Silica Products Co., manufacture of light-weight concrete, (P.), B., 558.

Cross, R., and Cross Development Corporation, refining petroleum oil, (P.), B., 770.

Cross, W. H. See Monckton, P. H. P.

Cross, W. M., gas producers, (P.), B., 160. Cross, W. M., and Gasoline Products Co., Inc., treatment [cracking] of petroleum oils, (P.), B., 548, 881.

Cross Development Corporation. See Cross, R. Crossley, J. S., and Turri, G. G., combustion of fuel in furnaces, (P.), B., 1005. Crossley, M. L., and Calco Chemical Co., pharmaceutical, (P.),

Crossley, M. L., Simpson, G. S., and Calco Chemical Co., salts of

β-naphtholsulphonic acids and their manufacture and separation, (P.), B., 637.

Crossman, A., mixer, (P.), B., 838. Crossman, F. M., dryer and carboniser for fuel agglomerates, (P.), B., 968.

Crouch, N. M., dye set [for fixing dyes on textiles], (P.), B., 716. Crow, W., and Dittlinger Crow Co., calcination of alkaline-earth materials, (P.), B., 556.

Crowe, P. L., crushing machine, (P.), B., 306. Crowe, T. B. See Mills, L. D.

Crowell, W. R., and Kirschman, H. D., potentiometric determination of octavalent osmium, A., 287.

potentiometric determination of bromine, octavalent and quadrivalent osmium in hydrobromic acid solutions, A.,

Crowell, W. R., Yost, D. M., and Carter, J. M., catalytic effect of ruthenium salts on the reduction of perchloric acid by hydrobromic acid, A., 518.

Crowley, A. J., and Humboldt Sulphur Co., filtering and extracting sulphur, (P.), B., 1015.

Crowley, H. L., and Isolantite Co. of America, Inc., moulding of [powdered] ceramic material, (P.), B., 284. Crowther, E. M. See Blair, G. W. S.

Crowther, J. A., action of ionising radiations on colloids, A., 394. Croxford, J. IV., differential halogen absorption of oils and fats, B., 860.

Crozemarie, M. See Malvos, R.

Crozier, R. H., vertical retort for use in distillation of shale and like materials, (P.), B., 885\*.

Crüm, A. G. Scc Elektro-Thermit Ges.m.b.H. Cruess, W. V., and Richert, P. H., effect of hydrogen-ion concentration on the toxicity of sodium benzoate to microorganisms, A., 1491.

Cruess, W. V. See also Fattah, M. T., and Marsh, G.

Cruickshank, E. M., vitamin-A and -D content of cod-liver meal, A., 1344. iodine content of the thyroid and ovary of the fowl during the

growth, laying, and moulting periods, A., 1486. Cruickshank, E. M., Hart, E. B., and Halpin, J. G., vitamin-A

and -D content of cod-liver meal, A., 1344. Cruickshank, E. W. H., and Prosad, S., action of insulin on the free muscle-sugar of the normal and diabetic heart, A., 1342.

Crump, J. W., and Bakelite, Ltd., manufacture of resinous condensation products of aldehydes with phenol and urea, or of aldehydes and urea, (P.), B., 484.

Crundall, S. F. W. See Spence & Sons, Ltd., P. Crutchfield, C. L., X-ray photography of mineral accumulations in plants, A., 1346.

Cruz, A. O. See Reyes, F. D.

Cruz, M. C., Lara, C. B., and Paras, E. M., blood-calcium in

leprosy, A., 1101. Cryder, D. S., and Frolich, P. K., catalysts for the formation of alcohols from carbon monoxido and hydrogen. IV. Decomposition and synthesis of methyl alcohol by catalysts composed of zinc and chromium oxides, B., 934.

Cseresznyés, G. See Ferencz, A.

Cserneczky, B., comparative tests of the initiating powers of lead azide and mercury fulminate detonators, B., 578

Csiky, J. von, determination of the unsaturation and lime requirement of soils on the basis of their hydrolytic acidity, B., 788.

Csiky, J. von, and Becker, E., use of artificial fertilisers in the light of results from field trials and soil examination, B., 66.

Csonka, F. A., and Jones, D. B., glutclins. V. Glutelins of rye (Secale cereale) and of barley (Hordeum vulgare), A., 857.

Csūrös, Z. Sec Zemplén, G.
Cu, C. K. Sec Chen, K. K.
Cubin, H. K., denaturation of proteins. V. Denaturation by acid, A., 459.

Cuboni, E., nephelometric and colorimetric measurements with a photo-electric current, A., 288.

Cude, H. E. Sec Rose, R. P. Cuker, K. See Komers, K.

Culhane, K., use of rabbits in insulin assay, A., 725.

Culhane, K., Marks, H. P., Scott, D. A., and Trevan, J. W., insulin. II. Physiological assay, A., 851.

Culhane, K. See also Carr, F. H.

Culhane, P. J. See Whitmore, F. C. Cullen, G. E., quinhydrone electrode, A., 1260.

Cullen, G. E. See also Earle, I. P. Cullen, J. R. See Gearin & Sons, I

Cullen, J. R. See Gearin & Sons, Ltd., M. Cullinane, N. M., Algar, J., and Ryan, H., synthesis of 5:7:2':4'tetrahydroxyflavone and of 7:2':4':6'-tetrahydroxyflavone,

Cullinane, N. M., and Philpott, D., synthesis of some phenyl styryl ketones and related compounds, A., 1181.

Culmann, J., Ahrens, E., and Siegle Corporation of America, Inc., G., non-poisonous colouring matters for cosmetics, (P.), B., 700.

Culp, F.B. See Remington, R.E. Culpepper, C.W., sulphur-spray residues and the swelling of tin cans packed with peaches, B., 736.

Cuminatto, A. See De Christiani, H. V. Cumming, W. M., and Ferrier, G. S., neutral reduction of nitrocompounds, A., 693.

action of the Grignard reagent on azoxybenzene, A., 693. Cumming, W. M., and Howie, G., neutral reduction and double

basic zinc salts, A., 693

Cummings, A. D., and Sebrell, L. B., rubbers with low nitrogen content, B., 611.

Cummings, A. D., and Simmons, H. E., ultra-accelerators [of vulcanisation of rubber], B., 28. inaccuracies in determination of acidity of raw rubber by water

extraction, B., 29. Cummings, D. E., separation of particulate matter [dusts] smaller than screen sizes into graded fractions, B., 927.

Cummings, R. See Pike, R. D

Cummins, H. A., Kennelly, V. C. E., and Grimes, M., fungi found in milk, B., 926.

Cundall, K. N., determination of naphthalene [in gas], B., 310. Cunlifte, P. W., colour of light sources. III. Sunlight and skylight, B., 280.

Cunliffe, P. W., and Farrow, F. D., photographic method of investigating the colour of light sources, and the reflecting

power of coloured fabric and other substances, B., 959. Cunliffe, P. W., and Lanigan, H., colour of light sources. I. Carbon arcs. II. Daylight lamps, B., 280.

Cunniff, B., Lee, N., and Colloidal Equipment Corporation, disintegrating machine, (P.), B., 306.

Cunningham, A. B., and Republic Flow Meters Co., gas analyser, (P.), B., 707\*

Cunningham, G. E. See Weiser, H. B.

Cunningham, O. D., and Reilly, P. C., treatment of (A) tar or (B) pitch, (P.), B., 769.

Cunningham, T. R., and McNeill, T. R., analysis of chrome ores, B., 478

Cuno, C. W., economic factors in chemical plant location, B.,

Cuny, L., different behaviour of some bile acids in the classical colour reactions, A., 699.

Cuny, L. See also Chiray, M.

Cupples, H. L., solubility in the gaseous phase, especially in the

system NH<sub>3</sub>(liq.)-NH<sub>3</sub>(gas)-H<sub>2</sub>(gas)-N<sub>2</sub>(gas), A., 766. Supr. V., determination of beryllium as pyrophosphate and as anhydrous sulphate, A., 285.

thermostat, A., 673\*.

hydrolysis of certain beryllium salts of strong acids, A., 1010. hydrolysis of aluminium salts of strong acids, A., 1237.

Cupr. V., and Salansky, H., hydrates of beryllium halides, A., 38. Curd, F. See Mines, H. M.

Curie, (Mme.) I., measurement of the active deposit of radium by the penetrating  $\gamma$ -radiation, A., 233.

Curie, M., and Lepape, A., dielectric cohesion of the rare gases, A., 121, 1210\*

Curie, (Mme.) P., probability curves describing the action of X-rays on bacteria, A., 357.

[value of the period of polonium at various places], A., 1358. invariability of radioactive constants, A., 1358.

Curjel, W. R. C., new type of alum, A., 246.

Curme, G. O., jun., and Carbide & Carbon Chemicals Corporation.

manufacture of glycols, (P.), B., 89\*.
Curme, G. O., jun., Reid, E. W., and Carbide & Carbon Chemicals Corporation, manufacture of isopropyl alcohol, (P.), B., 275.

Currie, B. W., and Alty, T., adsorption at a water surface. I., A., 390.

Curs, A. See I. G. Farbenind. A.-G. Curtin, L. P., manufacture of alkali hydroxides, (P.), B., 644\*. Curtin, L. P., and Western Union Telegraph Co., treatment of wood, (P.), B., 599. wood preservative, (P.), B., 817.

Curtis, F. R., pharmacological action of some tertiary amines related to ephedrine, A., 721.

Curtis, T. S., physical structure of refractory materials, B., 355. Curtis, T. S., and Pacific-Southwest Trust & Savings Bank, magnesia product and its manufacture, (P.), B., 53.

manufacture of refractory compositions, (P.), B., 645. Curtis, W. E., and Harvey, A., structure of the band spectrum of helium. V. and VI., A., 1, 1350.

properties of the He<sub>2</sub> rotation terms, A., 964.

Curtiss, L. F., optical method for analysing photographs of a-ray tracks, A., 534.

close collision between an α-particle and a nitrogen nucleus, A., 1358.

Curtman, L. J., and Plechner, W. W., detection of the presence of reducing radicals in the systematic analysis for the acids, A., 284

precipitation of group II acids (chloride group) in the presence of other acid radicals, A., 284.

Cushing, D., metallurgical furnace, (P.), B., 175, 330\*.

Cushing, D., and Barrett Co., melting and refining non-ferrous metals, (P.), B., 726\*.
Cushman, D. A. See Cox, E. R.
Cushman, O. E., Doell, T. W., and Standard Oil Co. of California,

manufacture of soaps from sulphonated mineral-oil acid sludge, (P.), B., 843.

Cusin, M. (Société Lyonnaise de Soie Artificielle), and Chevalet, P. A. A., manufacture of cellulose products, (P.), B., 774\*

Cussons, G. W., and Cussons, Ltd., G., mechanism for stirring the contents of vessels, (P.), B., 40.

Cussons, Ltd., G. See Cussons, G. W.

Cuta, F., influence of cations of the alkali metals on the precipitation of zinc ferricyanide, A., 1407.

Cutler, J. V., hardpans, concretionary layers, and neo-formations of the soils of the more arid parts of the Union [of South Africa], B., 951.

Cutler-Hammer Manufacturing Co. See Nash, C. A., and Richardson, L. T.

Cuvelier, V., determination of bi- and ter-valent cobalt, A., 1032

phenylthiohydantoic acid for determination and separation of cobalt, A., 1414.

Cuvelier, V. See also Gillis, J.

Cycle Co. See Blomfield, A. L.

Czapska, (Mlle.) W., Raman spectra of p., o., and m-xylenes, A., 976.

Czarnecki, E. See Areiszewski, W.

Czerny, M., Raman effect in quartz, A., 240, 378, 627.

Czezowska, Z., and Goertz, J., influence of ergotamine on the blood-sugar, A., 97.

D.

D.P. Battery Co., Ltd., and Waddell, J., negative secondary battery plates, (P.), B., 401.

D.P. Battery Co., Ltd. See also Brown, H. G.

Dack, G. M., and Wood, W. L., determination of caseinogen hydrolysis by Clostridium botulinum, A., 218.

Da Cruz, A., action of adrenal tissue on lecithin, A., 1107.

 Dadieu, A., optical experiments with perylene and its derivatives.
 II. Visible absorption spectra of some di-derivatives, A., 487.

chemical and optical properties of the reactive organic groups.

Dadieu, A., and Kohlrausch, K. W. F., Raman effect with isomeric organic substances, A., 866.

Raman effect of water, A., 976. Raman effect, A., 976, 1127.

Dadieu, A. See also Zinke, A. Dadswell, H. E., and Hawley, L. F., chemical composition of wood in relation to physical characteristics, B., 1044. Daehn, E. See Vorländer, D. Daehr, H. See Rosenheim, A.

Daene, H., and Schmerwitz, G., test of the theoretical explanation of secondary electron emissions, A., 619.

Dänzer, H., absorption of Hertzian waves by ionised gases, A., 861.

Da Fano, E., organo-gels, A., 1004. Da Fano, E. See also Emanueli, L.

Daft, F. S., nitrogen distribution of gelatin, A., 458, 1188.

Daggett, A. F., application of the thiocyanate method for the precipitation of copper in the confirmatory tests for cadmium and antimony [in Noyes' scheme of qualitative analysis], A., 1259.

Dahl, O., and Haase, C., changes of length and of the modulus of elasticity of beryllium-copper alloys during age-hardening,

Dahl, O., Holm, E., and Masing, G., changes during the ageing of beryllium-copper alloys observed by röntgenographic methods, A., 996.

age-hardening of beryllium-copper alloys followed by X-ray examination, B., 98.

Dahl, O., and Kjörstad, E. A. H., apparatus for the preparation of cooling brines, (P.), B., 128.

Dahl, O. See also Masing, G.

Dahlberg, A. C. See Hening, J. C. Dahlberg, H. W. See Brown, R. J.

Dahlblom, T., relation between electrical conductivity of solutions and their vapour pressure, A., 768.

Dahmlos, J. See Fredenhagen, K. Dailey, H. T., and Benedict, H. C., polarised light and cocaine decomposition, A., 583.

Dailey, M. E. See Thompson, W. O.

Daimler, K. See Grasselli Dyestuff Corp., and I. G. Farbenind. A.-G.

Dains, F. B., and Brewster, R. Q., [preparation of] iodobenzene, A., 1051.

Dains, F. B.See also Lakra, H.

Dakin, H. D., condensation of aromatic aldehydes with glycine and acetylglycine, A., 811.

Dakin, H. D., and West, R., trimethyl-a-glutarobetaine, A., 1283.

Dalbey, G. E., Hanford, T. P., and Stanley Chemical Co., treating impure lead and lead alloys; treating mixtures containing alkali salts of certain metals [slags from lead refining]; treating metal particles [lead alloys], (P.), B., 250.

Dale, A. J., Swallow, H. T. S., and Wheeler, F., after-expansion

and true sp. gr. of silica refractories for carbonising plant, (P.),

B., 683.

Dale, H. See Vegard, L.

Dale, J. K., rotatory power and structure in sugar group. XX.

Two isomeric crystalline compounds of d-mannose with calcium chloride, A., 1280.

Daley,  $J_{\cdot}$  See Symons, A. S. M.Dalhn, E. See Vorländer, D.

Dalietos, J., and Makris, K., catalytic oxidising action of platinum, A., 1401.

D'Alise, M. See Califano, L.

Dallas, J. C., and Wilson, M., treatment of sewage by the activated sludge process, (P.), B., 836.

Dallwitz-Wegner, R. von, galvanic electricity and cohesion pressure; "space-energy," A., 885.

Dallyn, F. A., purification of sewage and analogous liquids, (P.). B., 266.

Daloz, J. G., volumetric determination of explosive gases or gaseous mixtures, c.g., eudiometric measurement of firedamp, (P.), B., 970.

Dal Prato, L., Blau gas and its industrial applications, B., 462. Dalton, R. H., activation of oxygen by electron impact, A.,

1123 Dalton, R. H., and Hinshelwood, C. N., oxidation of phosphine at

low pressures, A., 1243. Dalton, W. F., obtaining pure oxygen from a single or double oxygen plant, with a greater output, (P.), B., 517.

Daly, R. E., and American Maize Products Co., production of dextrose, (P.), B., 490.

Damas, L., purine substances and uric acid, A., 614.

Damianovitch, H., chemical inertia of the rare gases. I. Action of helium on platinum, A., 156, 1406.

classical thermodynamics and the new problems of chemical dynamics, A., 509.

action of helium on platinum, A., 523.

relative critical energy of isokinetic reactions, A., 1394.

Damianovitch, H., and Trillat, J. J., action of helium on platinum, A., 523.

Damiens, A. See Lebeau, P.

Damm, P., properties of coking coals and their behaviour on coking, B., 382.

swelling and expansive force of coals, B., 382.

importance of the low-temperature assay in the investigation of coking coals, B., 666.

Dammick, D. L., and Dickinson, W. P., preparation of quinaldinyl chloride and ethyl quinaldinylacetoacetate, A., 329.

Damon, L. C. See Hartwell, B. L.

Danckwardt, P., converting solid carbon into liquid hydrocarbons, (P.), B., 971.

Dane, E. See Wieland, H.

Dangeard, P., favourable action of potassium iodide on the volatilisation of iodine [in sea-weeds], A., 360.

Dangschat, G. See Fischer, H. O. L.

Daniel, A. F. See Stuhlman, O. Daniel, F. A. G., and Van Vlaardingen, J., suction gas generator for distilling and gasifying inferior fuel and its operation, (P.), B., 880.

Daniel, W. See Hein, F.

Daniels, A. L., Stearns, G., and Hutton, M. K., calcium and phosphorus metabolism in artificially fed infants. I. Influence of cod-liver oil and irradiated milk, A., 1195.

Daniels, F. See Busse, W. F. Daniels, F. H., and Riley Stoker Corporation, pulverising apparameters, F. atus, (P.), B., 543, 838.

two-zone pulverising apparatus, (P.), B., 927.

Daniels, J. S., and Meeze, E. H., production and activation of carbon, (P.), B., 195.

Daniels, S., aluminium-base alloy, (P.), B., 525.

Danielson, I.S. See Norris, E.R. Danielson, R.R., effect of soluble salts on the properties of enamels, B., 918.

Daniewski, W., ozonisation under the action of high-frequency discharges, A., 520.

Danilitschenko, P. T., and Ravitsch, M. I., conversion of water and iodine into hydriodic acid in the presence of charcoal, A., 658.

Danilov, S., ketonic transformation of aldehydes at high tem-

peratures. I., A., 1166.

Danilov, S., and Venus-Danilova, E., isomerisation of hydroxyaldehydes. II. Transformation of bromodicyclohexylacetaldehyde and dicyclohexylglycollaldehyde, A., 1448.

Danilova, M. P. See Botchkarev, P. V.

Danilovich, A. J. See Petrov, G. S.

Danmanville, P. See Terroine, E. F.

Dann, A. T., and Davies, W., reactions of nitrosulphonyl chlorides. I. Reactions of hydrazine hydrate with o-nitrosulphonyl chlorides, A., 921.

Danneel, H., recrystallisation, B., 115.

Dannefelser, W. See Schaum, K.

D'Ans, J., oxidation and weathering of linseed oil paints, B., 988.

D'Ans, J., and Dawihl, W., acid phosphates of thorium, A., 411.

D'Ans, J., and Deutsche Gasglühlicht-Auer-Ges.m.b.H., manufacture of refractory substances [from high-grade zirconia], (P.), B., 898\*.

Dans, (Miss) W., and Tower, O. F., colloidal behaviour of the sulphides and hydroxides of cadmium and zinc, A., 643. Dansette, A. See Martinet, J.

Dantinne, R., and Lenaerts, P., photo-electric effect of ultra-

violet rays on gases, A., 483.

Darbari, N. L. See Aggarwal, J. S.

Darbishire, F. V. See Buxton, B. H.

Darby, C. L. See Ande Rubber Co., Ltd.

Darenfeldt-Holtan, M., and Holtan, E. N., reactions of sulphur in the soda-house of sulphate-cellulose factories, B., 917.

Darmois, E., rotatory power of tartrates of organic bases; study of strong electrolytes, A., 259.

reaction of alkali molybdates with malic and tartaric esters, A., 295.

Darrah, W. A., apparatus for heat application, (P.), B., 78.

Darroch, J., ealorimetric bomb, (P.), B., 461\*.

Darrow, D. C., and Hartmann, A. F., chemical changes occurring in the body as a result of certain diseases. IV. Primary pneumonia in children, A., 1193.

Darrow, D. C. See also Hartmann, A. F.

Darrow, K. K., scattering of quanta with diminution of frequency, A., 1359.

Darwin, C. G., electromagnetic equations in the quantum theory, A., 234.

collision problem in the wave mechanics, A., 863.

Das, A. K., quantum of cosmic radiation and the relative mass of proton and electron, A., 1360. Das, K. See Richardson, O. W.

Das, P., Raman effect and fluorescence, A., 490.

Dasannaeharya, B., light from hydrogen canal rays, A., 234.
Das-Gupta, B. C., and Bose, P. K., benzidine rearrangement in heterocyclic series. III., A., 1317.

Dasgnpta, J. See Ray, P.
Das-Gupta, P. N., use of phenolic acids in the detection, separation, and determination of metals. I. Separation of 2A group

(analytical) motals, A., 1412.
Das-Gupta, P. N., Roy, G. C., and Sil, K. M., gravimetric determination of lead. I. Soluble salts, A., 286.
Das-Gupta, R. N. See Mahanti, P. C.

Da Silva, M. A., electroaffinity of gases, A., 1371.

Dass, B., and Ellis-Foster Co., food product, (P.), B., 492.

Dastur, R. H., and Buhariwalla, N. A., chlorophyll from tropical plants and its determination by means of the spectrograph, A., 110.

Datta, R. L., and Basn, T., bleaching of gangwa wood (Excacaria agalloha) in the manufacture of matches, B., 74.

preparation of a solution containing phosphoric acid direct from bone ash for the impregnation of match sticks to render them non-glowing, B., 74.

chemical composition for matches, B., 74.

Datta, S., and Sen, S., determination of ionisation potentials,

Daudt, H. W. See Du Pont de Nemours & Co., E. I.

Daum, K., effect of heat on certain constituents of milk; adult utilisation of heated milk, A., 91.

Daure, P., secondary radiations observed in the molecular diffusion of light by fluids (Raman effect), A., 11, 240. comparative study of the Raman spectra of some hydrogen

compounds, A., 865.

photometric study of the Raman effect, A., 866.

Dauvé, test for arsenic, A., 42.

reciprocal displacement of metals, B., 212.

Davenpert, H. A., Davenport, H. K., and Ranson, S. W., muscular contraction. III. Change in glycogen during contraction

produced by tetanus toxin, A., 844.

Davenport, H. A., Dixon, H. H., and Ranson, S. W., muscle-phosphorus. III. Distribution of acid-soluble phosphorus compounds during parathyroid tetany, A., 1332.

Davenport, H. A., and Socks, J., muscle-phosphorus. II. Acid hydrolysis of lactacidogen, A., 466.

Davenport, H. A. Sec also Dixon, H. H., and Hinsey, J. C. Davenport, H. K. See Davenport, H. A.

Davey, N. See Thomas, W. W. Davey, W. See Rubber Growers

See Rubber Growers' Assoc., Inc. Davey, W. C., oxidation of rubber mixings, B., 611.

Davey, W. P. See Gen. Electric Co., and Steele, F. A.

David, A., and Dip-It, Inc., dyeing composition, (P.), B., 514.

David, A. D., and Universal Oil Products Co., conversion [cracking] of petroleum oils, (P.), B., 508.

David, J. T., action of bromine on insect oils, A., 714.

David, L., determination of camphor in camphorated oil, B., 416. determination of total alkaloid content of Lobelia inflata and its preparations, B., 416.

David, M. See Sisley, P.

Davidowicz, J. See Chauvenet, E.
Davidsohn, J., dependence of chemical composition of oils on climate, B., 292.
Davidson A. See Imperial Cham Invariant Cham

Davidson, A. See Imperia Davidson, E. See Pilat, S. See Imperial Chem. Industries, Ltd.

Davidson, G., and Laucks, Inc., I. F., preparation of substances composed in part of protein-containing cells for the manufacture of adhesives, (P.), B., 865.

Davidson, G. See also Cone, C. N., and Laucks, I. F.

Davidson, J., manganese in cereals and cereal mill products, B., 656.

Davidson, J., and Capen, R. G., determination of manganese in plant materials by the periodate method, B., 866. Davidson, J. G., and Carbide & Carbon Chemicals Corporation,

composition containing cellulose derivatives, (P.), B., 554. inhibitor [for use in pickling metals], (P.), B., 900.

manufacture of propylene glycol ether, (P.), B., 917\*.

lacquer, (P.), B., 1047.

Davidson, J. M., [with Lowy, A.], reactions of vinyl chloride and benzeno in presence of aluminium chloride, A., 1434. Davidson, P. M. See Richardson, O. W. Davidson, R. L. See Frolich, P. K.

Davidson, S. See Manchot, W. Davidson, T. M., retorts for the treatment of oil shale, etc., (P.), B., 121.

Davidson, W. B., determination of sulphur in benzol, B., 160. Davidson, W. B., Michie, A. C., and Muddiman, E. W., distillation

of tar, oils, etc., (P.), B., 633. Davidson, W. M., insecticidal tests with oils and alkaloids of

larkspur (Delphinium consolida) and stavesacro (Delphinium staphisagria), B., 831.

Davies, C., jun., manufacture of water-gas, (P.), B., 587.

Davies, C. W., calibration of conductivity cells for use with dilute solutions. I. At 18°, A., 511.

Davies, C. W. See also Grindley, J.

Davies, H. R., and Industrial Research Corporation, air cleaner, (P.), B., 460.

Davies, J., coating of metallic surfaces for prevention of corrosion, (P.), B., 524.

Davies, J. S. H. Seo Phillips, J. W. C.

Davies, L. P., soft X-ray emission from various elements after oxidation, A., 867.

Davies, R. C. See Dunlop Rubber Co., Ltd:

Davies, R. O., and Provan, A. L., relation of food to the composition of milk, B., 620.

Davies, T. E., drying of hops, grain, and other like agricultural products, (P.), B., 71.

Davies, W., and Down, R. A. R., preparation of p-azoxyanisole and derivatives, A., 550.

Davies, W. See also Dann, A., and Phillips, W. H.
Davies, W. C., and Jones, W. J., tertiary phosphines containing
the n-butyl radical, A., 303.
Davies, W. C., Pearse, P. L., and Jones, W. J., tertiary phosphines

containing higher alkyl radicals, A., 1049.

Davies, W. G., and Keeping, E. S., magnetic susceptibilities of

somo amalgams and binary alloys, A., 384.

Davignon, V. D., and General Plate Co., gold alloys, (P.), B., 985. Davis, A. B., and Keystone Watch Case Co., photographic etching

and light-sensitive resist therefor, (P.), B., 378. Davis, A. B., and Pennsylvania Coal Products Co., purification of

a-naphthol, (P.), B., 889.

Davis, A. B. See also Barber Asphalt Co.

Davis, A. C., manufacture of cement, etc., (P.), B., 396.

Davis, (Miss) A. E., kinetics of the coagulation of gold sols; "thermo-senescence effect" exhibited at elevated temperatures, A., 393.

Davis, B., and Barnes, A. H., capture of electrons by swiftly-

moving a-particles, A., 971.

Davis, B., and Purks, H., fine structure in the Compton effect, A., 986.

fine structure in the K series of molybdenum, A., 1355. Davis, C. E., and Salisbury, H. M., chart of indicators useful for p<sub>II</sub> measurements, A., 666.

Davis, C. E., Sheppard, S. E., and Briefer, M., specifications for standard gelatin; report of Committee on standard gelatin appointed by Division of Leather and Gelatin Chemistry, B., 296.

Davis, C. W., and Messer, L. R., Fuller's earth and acid-treated earths as oil-refining adsorbents, B., 931.

Davis, C. W. See also Aladdin Industries, Ltd., and Du Pont de Nemours & Co., E. I. Davis, D. S., freeness testing as an aid in pulp evaluation, B.,

319.

Davis, D. W., and New, A. L., catalytic agent in storage battery, (P.), B., 177. Davis, F. L. See Albrecht, W. A.

Davis, F. W., and Allen, S. G., Bessemer process of making steel, (P.), B., 523.

Davis, G. E., spectrophotometric method of studying hæmoglobin and other coloured substances in solution, A., 203.

Davis, G. H. B. See Dean, E. W.

Davis, G. K., apparatus for treating liquids with gases, gases with liquids, (P.), B., 1036.

Davis, H. L. See Bancroft, W. D.

Davis, H. S., problems in the determination of unsaturated

hydrocarbons in gases. I. Separation by fractional distillation, B., 583.

Davis, H. S. See also Norris, J. F.

Davis, J. D., fusain, B., 763.

Davis, J. D., and Reynolds, D. A., spontaneous heating of coal, B., 5.

Davis, J. D., and Younkins, J. A., electrostatic method for determining fusain in bituminous coal, B., 763.

Davis, J. S. jun. See Binger, C. A. L.
Davis, J. W. See Tolman, R. C.
Davis, K., [shaking table for] separating or cleaning intermixed divided materials, (P.), B., 501.

Davis, K., and Poale-Davis Co., separation of intermixed divided materials, (P.), B., 307. Davis, K. R. See Derby, I. H.

Davis, M. N., electron reflexion from cobalt, and electron waves, A., 620.

Davis, N. R., and Metropolitan-Vickers Electrical Co., Ltd., electrical induction furnace, (P.), B., 330.

Davis, R. H., photometer, (P.), B., 193.
Davis, R. H., Davis, R. W. G., and Rosling, C. G., indicating [by audiblo signals] the exhaustion of gas-purifying substances

[in respirators], (P.), B., 81.

Davis, R. W. G. See Davis, R. H.

Davis, T. L., and Blanchard, K. C., dearrangement of nitrocarbamide and its application in syntheses, A., 918. dearrangement of nitrobiuret; application in synthesis, A.,

918. dicyanic acid, A., 918.

Davis, T. L., and Hill, J. W., oxidation of tribromoresorcinol, A., 439.

Davis, T. L., and Lane, S. C., [preparation of] n-butyl carbamate, A., 1049.

Davis, W. G., and Imperial Chemical Industries, Ltd., manufacture

of higher alcohols, (P.), B., 635.

Davis, W. N., Hampton, W. H., and Standard Oil Co., removing sulphur compounds from petroleum oils, (P.), B., 744.

Davisson, C. J., and Germer, L. H., attempt to polarise electron waves by reflexion, A., 7.

test for polarisation of electron waves by reflexion, A., 736.

diffraction of electrons by a single layer of atoms, A., 1357.

Dawans, A., furnace for fusing finely-divided materials, and agglomeration of dust from blast-furnaces, (P.), B., 648. melting finely-divided materials and agglomeration of blastfurnace dust, (P.), B., 725.

Dawbarn, M. C., seasonal variation in iodine percentage and dry weight of thyroid glands of sheep in Australia, A., 715. Dawidson, E. See Pilat, S. von.
Dawihl, IV. See D'Ans, J.

Dawsey, L. H. See Urey, H. C. Dawson, B. M., and Fleischmann Co., preparation of yeast compositions, (P.), B., 656.

Dawson, H. M., interionic forces and the ionisation of weak electrolytes, A., 1009.

Dawson, H. M., Hall, G. V., and Key, A., acid and salt effects in catalysed reactions. XVII. Variation of catalytic activity of an acid with its concentration, and determination of ionisation constants, A., 36.

Dawson, H. M., Hoskins, C. R., and Smith, J. E., acid and salt effects in catalysed reactions. XXI. Catalytic effects associated with oxalic acid in first and second stages of dissociation, A., 1245.

Dawson, H. M., and Lowson, W., acid and salt effects in catalysed reactions. XVIII. Dynamics of autocatalysed ester hydro-

lysis, A., 151.

acid and salt effects in catalysed reactions. XIX. Catalytic activity of chloroacetic acid in the hydrolysis of ethyl acetate, A., 518. acid and salt effects in catalysed reactions. XX. Ionisation

of acids in salt solutions, A., 889.

Dawson, H. M. See also Claxton, G. Dawson, J. R., and Electro-Metallurgical Co., wolding rod, (P.), B., 1019.

Dawson, L. H., triboelectricity of quartz and mercury, A., 871. Dawson, L. H., and Crew, W. H., self-reversed lines in the spectrum of mercury, A., 1353.

continuous spectrum of mercury, A., 1353.

Dawson, L. H. See also Crew, W. H. Dawson, S. E., [non-magnetic] ferrous alloys, (P.), B., 1019.

Day, C. M., and Scullin, C. J., furnace for the reduction of iron, (P.), B., 213.

Day, D., effects on Pisum sativum of a lack of calcium in the nutrient solution, A., 855.

Day, D. T., extracting the oily bases from crude shale oil, (P.),

Day, E. M. See Bollinger, A

Day, J. N. E. See Brady, O. L.

Day, M. R., and Rubber Latex Research Corporation, stabilised latex and its production, (P.), B., 531\*.

Day, W. N. See Englis, D. T. Dayal, M. See Setb, J. B.

D'Azambuja, L., structure of the solar chromosphere, A., 486.

De, S. See Chakravarti, T. Deacon, (Mrs.) B. R. See Burton, E. F.

Deacon, J. C., and Standard Oil Co. of California, separation of solids from oil, (P.), B., 884. Deakin, J. B., and Braunholtz, W. T. K., effect of size of coal on

properties of the resulting coke, B., 914.

De Amorim, T. F. See Gurgel, L.
Dean, A. L. See Dean, L. A.
Dean, E. W., and Davis, G. H. B., variation of viscosity of [lubricating] oils with temperature, B., 1039.

Dean, H., and Chloride Electrical Storage Co., Ltd., electric accumulators, (P.), B., 783.

Dean, H. P., and Imperial Chemical Industries, Ltd., [high-pressure] valves, (P.), B., 308.

Dean, J., jigger machines for dyeing, (P.), B., 849. Dean, J. N. See Smith, W. S.

Dean, L. A., and Dean, A. L., decomposition of citric acid by soil, B., 992.

Dean, P. M. See Moureu, C.

Deane, M. E., revival of the colour of flowers or other patterns on

carpets, rugs, mats, etc., (P.), B., 281.

Dearing, A. W., and Reid, E. E., alkyl orthosilicates, A., 47.

Deatrick, E. P., reduction of soil nitrates during the growth of

soya beans, B., 1026.

Deatrick, E. P., and Dorman, C., determination of the fineness of

marl, B., 296. Deb, S. C., spectrum of doubly-ionised bromine, A., 225.

spectrum of trebly-ionised bromine, A., 966. structure of trebly-ionised chlorine, A., 1209.

Deb, S. C. See also Majumdar, K. De Bajligethy, M. F., [hydrocarbon oil] distilling apparatus, (P.), B., 387\*

De Balsac, F., De Balsac, M. H., and Deforge, A., tanning value of "takaout" galls from Tamarix articulata, B., 257.

De Balsac, M. H. See De Balsac, F.

Bataaische Petroleum Maatschappij. Petroleum Maatschappij.

Debauche, H., apparatus for drying and distilling lignite, peat, non-coking coals, and other similar carbonaceous matter, (P.), B., 548\*.

De Baufre, W. L., and Allen, S. G., separation of mixed gases by progressive solubility, (P.), B., 801.

De Baufre, W. L. See also Allen, S. G., and Tolman, R. C. De Beauvais, G. M. G., and Prat, G. J., heat interchanger of the

plate type, (P.), B., 495. De Belsunce, G., palm-kernel oil and palm oil, B., 442.

Debenedetti, E. See Corbellini, A.

De Bethune, G., apparatus for the manufacture of pig iron, (P.), B., 133.

De Blasio, G. See Rossati, G. M.

De Blicquy, J. See Callebaut, C

Debo, A., and Internationale Bergin-Compagnie voor Olie en Kolen-Chemie, splitting of coal, oils, and other hydrocarbons, (P.), B., 387\*

De Boer, J. H., adsorption of gases at heteropolar crystal faces, A., 133.

adsorption of iodine on calcium fluoride, A., 257.

behaviour of alkali fluoborates in tungsten-filament lamps, A., 1251

De Boer, J. H., Arkel, A. E. van, and Naamlooze Vennootschap Philips' Gloeilampentabrieken, precipitation of hafnium and zirconium on an incandescent body [electric lamp filament], (P.), B., 481.

De Boer, J. H., and Naamlooze Vennootschap Philips' Gloeilampenfabrieken, preparation of fluorine, (P.), B., 897\*.

De Boer, J. H., and Zwikker, C., adsorption as a consequence of polarisation; adsorption isotherms, A., 875. De Boer, J. H. See also Arkel, A. E. van.

Debordes, G., determination of copper in grapo must and wines, B., 908.

De Brey, J. H. C., dehydrator for petroleum emulsions, (P.), B., 424.

De Brouckère, (Mlle.) L., adsorption of electrolytes by crystal faces, II., A., 757, 874\*, 1001\*.

De Bruin, T. L., spark spectrum of argon. II., A., 3, 111\*.

second spark spectrum of potassium, K III, A., 481.

De Bruin, T. L., and Kiess, C. C., series in the arc spectrum of chlorine, A., 859. series in the arc spectrum of bromine, A., 1207.

De Bruin, T. L. See also Bakker, C. J., Kiess, C. C., and Meggers, W. F.

De Bruyne, N. A., effect of temperature on the auto-electronic

discharge, A., 3.

layers of easium and nitrogen on tungsten, A., 1123.

Debuch, C. P., treatment of ores with gases in rotary furnaces, (P.), B., 176.

means for carrying off gases from rotary tubular furnaces for gas-treatment of ores, (P.), B., 329.

Debus, M. See Reihlen, H.

Debye, P., electric moments of molecules and the intermolecular forces, A., 12.

Debye, P., and Falkenhagen, H., dispersion of the conductivity of strong electrolytes, A., 143.

Décade, J., graph for urine analysis, A., 343.
De Camargo, T., Bolliger, R., and De Mello, P. C., influence of hydrogen-ion concentration on the development of Coffee arabica, A., 611.

De Carli, F., double carbonate of cobalt and potassium, A., 661. viscosity isotherms of binary mixtures. I. Benzene-sulphur monochloride. II. Nitrobenzene-sulphur monochloride, A.,

De Caro, L., lactacidogen in denervated muscle, A., 347.

isoelectric point of muscle-protein and buffering power of muscle-juice, A., 590.

mol. wt. of myoprotein, determined by Du Nouy's surfacetension method, A., 1329.

De Cew, J. A., manufacture of paper, (P.), B., 391.

De Christiani, H. V., and Cuminatto, A., improving the efficiency of electro-thermic installations, (P.), B., 62.

Decker, E. P., dryer, (P.), B., 116.

De Clerck, J., volumetric determination of carbon dioxide in beer, B., 734.

Deco, Ltd. See Golding, J.

Décombe, L., electrified spherical films and the Stark effect, A., 615. De Conno, E., Capalbi, S., and Fruitier, L., latices of Euphorbia tirucalli, E. candelabro, and E. abyssinica, B., 181.

De'Conno, E., and Frattura, M., Cotrone cheese, B., 374.

De'Conno, E., and Quarto, A., silkworm chrysalis oil, A., 714. De'Conno, E., and Rago, D., iodine value in relation to origin and

age of olive oil, B., 402. De'Conno, E., and Scopinaro, E., presence of mixed glycerides in butter from cows' milk, B., 374.

De'Conno, E. See also Piutti, A. De Coquet, C., determination of glycerol in wine, B., 145.

De Cori, P. See Nasini, A. G.

De Costa, M. S. See Maximov, J.

De Courmelles, F. See Risler, J.

Decourt, J. See Loeper, M.

De Crauw, T., 2:5-dichlorofluorobenzene and other aromatic fluoro-compounds, A., 1170.

De Crinis, M., determination of the density of small fragments of

[human] organs, A., 1480. De Croly, C. M. See Fink, C. G.

De Cugnae, A., purification of the antineuritic water-soluble vitamin-B by fractional precipitation, A., 852.

Dede, L., precipitation of zinc sulphide from solutions containing considerable quantities of sodium chloride, A., 43.

determination of zinc as zinc pyrophosphate in the presence of much sodium chloride, A., 164.

solubility influences and quantitative analysis, A., 1031. Dede, L., and Russ, W., germanium. I. Mode of treatment of germanite, preparation of pure germanium dioxide and of homogeneous germanium tetrachloride. . II. Action of carbon tetrachloride on germanium dioxide, A., 158.

De Diesbach, H., and Gubser, P. [with De Landerset, R., and Lempen, H.], derivatives of hydroxyaminomethylanthraquinones and dihydroxydianthraquinonylethylenes, A., 70.

Dedrick, D. D. See Herrmann, J. D.

Dedusenko, L. action of sodium ethoxide on ethyl cyclohexane. 2:3-dione-1:4-dicarboxylate, A., 558.

Dee, A. A. See Smith, S. W. J.

Deel, H., and Deel, (Mme.) H., influence of the absolute reaction of the soil on the formation and composition of tarragon essence, A., 612.

Deel, (Mme.) H. See Deel, H.
Deering, E. C. See Allen, L., and Powell, A. R. De Fazi, R., syntheses by means of radiant energy. III. Acenaphthene and benzaldehyde, A., 1298

De Florez, L., and Texas Co., apparatus for treating [cracking] hydrocarbons, (P.), B., 668. furnace, (P.), B., 799. Defoe, E. C. See Gray, E. D.

De Forest Radio Telephone & Telegraph Co. See Holborn, F.

Deforge, A. See De Balsac, F. De Fries, H. A., and Ludlum Steel Co., molybdenum nitriding

steels, (P.), B., 821. De Fries, H. A. See also De Fries, R. P.

De Fries, R. P., De Fries, H. A., and Ludlum Steel Co., stablesurface alloy steel resistant to acids, (P.), B., 561. manufacture of ferro-aluminium alloy, (P.), B., 725.

Defris, R., and Wälder, R., manufacture of activated carbon, (P.), B., 195.

combined action of formaldehyde and salts of certain heavy metals (zinc, copper, cadmium) on proteins and microorganisms, A., 1491.

Degenfeld, W. von. See Kuster, W. Degenhardt, W. R. Sco Boise, C. W.

De Giorgi, H. See Roffo, A. H.
De Goey, H. J. A. See Brender a Brandis, G. A.

De Graaff, J., determination of manganese in water, B., 266. De Graeve, P. See Fosse, R.

De Groot, IV., absorption of ultra-violet light by metastable atoms, A., 224.

[optical] concentration determination of atoms and ions, A.,

Deguide, C., recovering barium as barium carbonate from barium silicates, (P.), B., 208\*.

production of barium hydroxide, (P.), B., 516.

De Haan, K. See Grijns, G. De Haas, W. J., electrical conductivity [of metals], A., 127. new superconductors, A., 250.

superconductors, A., 385. De Haas, W. J., Aubel, E. von, and Voogd, J., superconducting mixture made up of non-superconducting elements, A., 652.

new superconductors; resistance of alloys at the temperatures of liquid hydrogen and liquid helium, A., 1135.

a superconductor, consisting of two non-superconductors, A., 1135.

resistance of compounds of metals at the temperature of liquid hydrogen and liquid helium, A., 1136.

De Haas, W. J., and Voogd, J., resistance-hysteresis phenomena of tin, lead, indium, and thallium at the temperature of liquid helium, A., 496.

superconductivity of gallium, A., 496, 1135.

change of the electric resistance of pure hafnium and zirconium between 1.3° and 90° Abs., A., 1136.

De Haas, W. J., Wiersma, E. C., and Capel, W. H., determination of the susceptibility of erbium sulphate at low temperatures,

De Haas, W. J. See also Aubel, E. van, and Becquerel, J.

De Hart, C. B., lubricant, (P.), B., 771.

Dehe, H., determination of phenol in sewage, B., 114.

De Hemptinne, A., ionisation and chemical combination of gases,

photochemical decomposition of benzaldehyde, A., 409. photochemical decomposition of benzaldehyde vapour, A., 409.

De Hlasko, (Mlle.) M., mobility of the hydrogen ion and the electrical conductivity of the halogen hydracids, A., 768.

Dehlinger, U., an X-ray effect of slow fracture, A., 984.

theory of recrystallisation of pure metals, A., 1220. Dehlinger, U., and Glocker, R., X-ray differentiation between mechanically and electrolytically produced gold coatings, B.,

Dehn, W. M. See Byrkit, G. D. De Horyath, Z., and Eagle Picher Lead Co., manufacture of black ash [barium sulphide], (P.), B., 896.

Dehottay, H., utilisation of [solid] carbonic acid [carbon dioxide], (P.), B., 95, 897\*.

Dehuff, W. F., and Glen Mixer Co., Inc., mixing machine, (P.), B., 269\*.

Deiches, S., bearing metals of the ternary system copper, antimony, lead, (P.), B., 687.

Deichsel, S. See Weyland, H.

Deighton, T., metabolism of two breeds of pigs, A., 345.

Deines, O. von, decomposition of thiosulphate by hydrogen chloride, A., 159.

hydrogen polysulphides, A., 159.

Deitz, L. S., jun., screening of materials, (P.), B., 498.
De Jahn, F. W., and Atmospherie Nitrogen Corporation, production of ammonia by synthesis from its elements, (P.), B., 642.

Dejean, P., illustration of the transformations of brasses containing 57.5-63.5% Cu by the study of their mechanical properties, B., 174.

brass for screw-cutting, B., 359.

Dejmek, J., logarithmic mixture law, A., 500.

De Jong, A. W. K., action of sunlight on the cinnamic acids, and the salts of trans-cinnamic acid; trimorphism of cis-cinnamic acid, A., 810.

De Jong, H. G. B., theory of vegetable tanning. IV. Separation into two liquid phases in systems hydrophyllic colloidwater-polyphenol, A., 764. lyophilic colloids. VII. Capillary electric charge and hydration

as characteristics of hydrophilic gels: reversible volume changes of agar gel, A., 1381.

De Jong, H. G. B., and Dekker, W. A. L., coagulation and separation into two liquid layers; systems gum arabie-gelatin, A.,

De Jong, H. G. B., and Gwan, O. S., lyophilic colloids. VI. Electroviscous effect with two hydrophilic sols which do not obey Poiseuille's law: linseed and carrageen, A., 1381.

De Jong, H. G. B. See also Kruyt, H. R. De Jong, (Frl.) M. E. A., 2-ethylpyrrole, A., 1313. De Jong, W. F., X-ray study of lateritic rocks and of sporogelite, A., 787.

enargite group; structure of sulvanite,  $Cu_3VS_4$ , A., 988. De Jongh, S. E. See Den Hoed, D., and Laqueur, E.

De Kadt, G. S. See Kruyt, H. R.

Dekker, J. W., equilibrium of a liquid with its vapour and the connexion with the thermodynamic potential, A., 398.

Dekker, P. See Rossem, A. van. Dekker, W. A. L. See De Jong, H. G. B.

De Klerk, G. T., non-conducting covering for pipes, (P.), B., 838. De Kolosovski, N., vapour pressures at low temperatures, A., 387. saturated vapour pressures and the latent heat of evaporation, A., 992.

De Kromme, L. See Waterman, N.

De la Bruère, A., measurement of the colour of tanning extracts, B., 140.

Delaby, R., and Charonnat, R., separator for continuous fractional distillation under reduced pressure, A., 166

Delaby, R., and Dubois, P., formation of allyl alcohol; decomposition of glyceryl formates by heat, A., 47. preparation of allyl alcohol, A., 538.

Delachaux, C. I., iron oxides and their manufacture, (P.), B., 433.

De Laet, F., methylcrotononitriles, A., 1049. De Landerset, R. See De Diesbach, H.

De Lange, S., systematic formulation of nitrocellulose lacquers. B., 293.

De Lange, W. Seo Purcell, R. H., and Smits, A.

Delaplace, R., chemical phenomena connected with the contraction of hydrogen in discharge tubes, A., 491.

Delaplace, R., and Rebière, G., irradiation of ergosterol: action of quartz [lamp] ultra-violet rays and of soft X-rays, A., 727. De la Roche, B., method for obtaining simplified spectra, A., 1205.

De la Roza, J.J., and Bagasse Products Corporation, production of alcohol, (P.), B., 491.

manufacture of cellulose pulp, (P.), B., 773.

De Laszlo, H. See Jenkins, F. A.

De Lattre, G., "galvanising" with cadmium, B., 58.

Delaunay, H., nitrogen excretion of fishes, A., 953.

Delaup, P. S., Zeeman effect in the calcium hydride A band, A.,

De Laval Separator Co. See Chadburn, W. R., Cherry, G. L., Flowers, A. E., Gilmore, V. J., Hapgood, C. H., Lindgren, H. O., McBerty,  $F.\ H.$ , and Miller,  $P.\ F$ 

Delbridge, T.G., Dure, H.F., and Atlantic Refining Co., treatment of mineral oils, (P.), B., 46.

Delco-Light Co., and Bichowsky, F. R., [manufacture of] methyl ether, (P.), B., 426.

Delcourt, Pinilla, B., Latorre, J., and Bancelin, J., the Poupin process [of extraction of sodium nitrate], B., 52.

Delépine, M., chloropyridino-derivatives of rhodium; rhodium tripyridinotrichlorides and dipyridinotetrachlorides, etc., A.,

Delépine, M., and Pineau, J., some complex ammonio-pyridines of iridium, A., 781.

Del Fresno, C., constitution of silver subfluoride, A., 410\*.

Del Fresno, C., and Valdés, L., potentiometric determinations with ferricyanide in alkaline solution. I. Vanadium and hyposulphite, A., 901, 1257.

potentiometric determinations with potassium ferricyanide in alkaline solution. II. Arsenic, antimony, tin, and thallium, A., 1257.

Delgado y Mier, J.J. See Abderhalden, E. Dellenius, H. See Saner, E. Delore, P., oxidative capacity and peroxidic-oxygen content of cod-liver oil: influence of ultra-violet light, A., 476.

Delorme, R., and Perrin, F., duration of fluorescence of uranvl salts in the solid state and in solution, A., 1127.

De Loureiro, J. A., is ozone a normal constituent of cod-liver oil? A., 90.

presence of an ozonide in the vitamin-rich fraction of cod-liver oil, A., 359.

Delponte, G. See Levi, G. R.

Del Regno, W., total emissive power of bismuth, A., 1353.

Deltex Co., ageing or reducing printed or dyed fabrics, (P.), B., 751. De Luce, R., manufacture of hydraulic cement, (P.), B., 646.

De Luserna, E. See Breslauer, J.

Dely, J. G., and Atmospheric Nitrogen Corporation, purification of gases, (P.), B., 433. Demag A.-G., apparatus for charging tilting smelting furnaces,

(P.), B., 24. De Mallemann, R., expression of refractive power, A., 13.

magnetic rotatory power in an anisotropic medium, A., 491. theory of optical activity in a homogeneous medium, A., 495.

De Mallemann, R., and Gabiano, P., measurement of the magnetic rotation of gases and vapours, A., 1128.

Demann, W. See Bernhard, R. Demarest, S. H. See Read, F. J.

Demaret, O., treating glass plates, etc., to prevent moisture affecting their transparency, (P.), B., 395\*.

Demassieux, (Mme.) N., action of the alkali carbonates on lead

chloride, A., 1154.

action of the alkali carbonates on lead bromide, iodide, and nitrate in aqueous solutions, A., 1251.

action of the alkali oxalates on the halogen salts of lead in

aqueous solution, A., 1252.

Demassieux, (Mme.) N., and Heyrovský, J., study of complex formation by the polarographic method, A., 269.

tervalent chromium, A., 770.

Dembinska, (Mlle.), S., crystal structure of thin metallic films, A., 631.

Demehenko, A. D., and Obryadchikov, C. N., oxidising lubricating oil bottoms, B., 1039.

De Meester, W. A. T. See Moesveld, A. L. T. De Meichsner, F. See Parisi, E.

De Mello, P. C. See De Camargo, T.

Demeter, K. J., detection of B. coli. aerogenes in milk, B., 926.

De Milt,  $C.\ M.$ , phenylstearic acid, A., 48. Deming,  $W.\ E.$ , and Mehring,  $A.\ L.$ , gravitational flow of fertilisers and other comminuted solids, B., 663.

De Mirasierra, G. See Fernandez, O. Demisch, O., kiln for calcining finely-divided material, e.g., lime, (P.), B., 520

Demmer, E. See Wessely, F.

Demolon, A., and Barbier, G., condition of formation and constitution of the humic-clay complex of soils, B., 296.

De Moltke-Huitfeldt, L., production of soap from sulphurised rosin, (P.), B., 254.

Demont, P. See Joye, P.

De Montby, H. See Berthêlemy, P.

De Montmollin, M., and Achermann, F., preparation of dihalogenated mixed secondary aliphatic amines. II., A., 1429.

De Montmollin, M., and Martenet, M., synthesis of hexahydro- $\beta$ collidine, A., 1078.

De Montmollin, M., and Matile, P., preparation of dihalogenated mixed secondary aliphatic amines. I., A., 1429.

De Montmollin, M., and Zelliker, E., free halogenated aliphatic amines,  $\Lambda$ ., 916. Dempster, A. J. See Bartky, W.

Dempster & Sons, Ltd., R., and Handley, W. H., apparatus for handling and quenching coke, (P.), B., 746.

Demski, A., experimental test of the Maxwell velocity distribution

law for electrons liberated from a glow cathode, A., 738.

Demuth, F., and Meier, R., lactic acid formation in tissue culture, A., 1330.

Demuth, F., and Riesen, I. von, protein metabolism of normal and malignant tissues in vitro, A., 344.

De Nagy, D., carbonisation of coal, (P.), B., 915.

De Nardo, L. U., colorimetric determination of nitrates in soils and waters, B., 297, 615.

Denayer, P. See Bouckaert, J. P.

Denecke, W., rapid determination of silicon in iron-silicon alloys by density measurements, B., 98.

Denham, H.J. See Simon, Ltd., H. Den Hartogh, M., acidity determination in sulphitation, using the  $p_{\rm H}$  value, B., 371.

Den Hoed, D., De Jongh, S. E., and Peek, A. E. J., behaviour of insulin on irradiation with X-, radium, and ultra-violet rays,

Deniau, M., production of facings, such as road surfaces and floorings, or other structures, such as pipes, mouldings, etc. [from concrete], (P.), B., 325.

production of facings, such as road surfaces and floorings, or other structures, (P.), B., 817.

Deniges, G., Deniges' phospho-coruleo-molybdenum compound,

A., 40.

micro-crystallographic identification of vohimbine, A., 201. identification of lead in any form by means of three successive

microcrystalline tests, A., 1258.
molybdenum-blue method for micro-determination of phosphate and arsenate ions, B., 939.

Denina, E., simple modifications of the Kohlrausch bridge for the potentiometric measurement of alternating-current resistance, A., 166.

Denis, W., King, E. L., and Briggs, F., ratio of urea-nitrogen to non-protein-nitrogen in the blood in normal pregnancy, A.,

Denisov, V. I., cyclic process for ammonia recovery from cokeoven gases, B., 156.

Denissov, A., diffuse illumination of photographic plates and photographic photometry, B., 1033.

Dennett, J. II., comparison of the Robinson, International, and Bouyoucos methods of mechanical analysis of non-organic soils, and the analysis of such soil with and without pre-liminary treatment with hydrogen peroxide, B., 259.

improved method of fusion for soils, B., 259. cobaltinitrite method for determination of potash with particu-

lar reference to soils, B., 1048.

Dennig, H., Dill, D. B., and Talbott, J. H., ammonium chloride acidosis, A., 1336.

Dennis, L. M., and Hunter, H. L., germanium. XXVII. Ger-

manium dichloride, A., 662.

Dennis, L. M., and Judy, P. R., germanium. XXX. Halogen substitution products of monogermane, A., 1154.

Dennis, W. See Herrmann, J. D.

Dennison, M. H. See Korenchevsky, V.

Denny, J. J., crushing machine, (P.), B., 497. Denoyel, P. See Morel, A.

Densch, comparison of Rhenania phosphate with superphosphate and basic slag [as fertilisers], B., 143. huminit, B., 532

cause of the sensitiveness to lime of yellow lupins, B., 616.

Densch, Hunnius, and Steinfatt, [fertilising] action of "ammonia-superphosphate" compared with ammonium sulphate and superphosphate, B., 616.

Rhenania phosphate [fertiliser], B., 616.

Densch, Steinfatt, and Günther, fertiliser trials with sodium nitrate, Chile saltpetre, and iodine on carrots, B., 448.

Densch and Strotha, von, comparison of the offect of ammonium sulphate with that of Chile saltpetre on the value of lupins as preparation for oats and the effect of superphosphate fertilisation of sugar beet, B., 906.

effect of large applications of ammonium sulphate on the yield

and staroh content of potatoes, B., 906.

effect of various potassium salts on potatoes, B., 906. Dent, (Miss) B. M., effect of boundary distortion on the surface

energy of a crystal, A., 1370. Dent, (Miss) B. M. See also Lennard-Jones, J. E. Dent, F. J., and Cobb, J. W., equilibrium  $CO_2 + C \rightleftharpoons 2CO$ , A.,

factors influencing the reactivity of coke, B., 629

Deodhar, D. B., Raman effect and hydrogen spectrum, A., 1361. Deodhar, G. B., X-ray pattern of metallic crystals, A., 746.

De Oliveira, J. C. See Coelho, E. De Ong, E. R., petroleum oil as a carrier for nicotine [in insecticides], B., 143.

specifications for potroleum oils to be used on plants, B., 371. De Pedro, S. See Echeverria, J.

De Piotrowski, W. Seo Galicyjskie Towarzystwo Nastowe "Galicja" S.A.
Depisch, F., and Hasenöhrl, R., blood-sugar regulation, fat and

carbohydrate metabolism, A., 1194.

Deppeler, J. H., and Metal & Thermit Corporation, welding high-carbon steel, (P.), B., 23.

De Procoudine-Gorsky, S., colour photography, (P.), B., 303.

De Procoudine-Gorsky, S., Pozniakov, N., and Société de Photo-

chimie "Elka," rendering gelatin insoluble and its application

to various arts [photography], (P.), B., 699.

De Ray-Pailhade, philothion, A., 715.

Derby, I. H., Reilly, P. C., and Davis, K. R., purification of hydrocarbons, (P.), B., 933.

Derby, R. L., hydrogen sulphide removal and water softening at Beverly Hills, Cal., B., 190.

De Reyeret, R., dryers for various materials, (P.), B., 452. De Robillard, J. F. M. R., apparatus for the concentration of

graphite and other ores by flotation, (P.), B., 100. De Rohden, C., and Commercial Pigments Corporation, manufacture of titanium tetrachloride, (P.), B., 681.

De Ropp, H. See Amer. Potash & Chem. Corp., and Burke, W. E.

Dersch, F. See Ziegler, K. Dershem, E., refractive indices and anomalous dispersion of soft

X-rays in platinum, silver, calcite, and glass, A., 747. reflexion of the Ka line of carbon from glass, A., 1355.

refractive indices of silver in the wave-length range 2-7 A., A., 1355.

indices of refraction of platinum for X-rays of long wave-length, A., 1355.

refractive indices of calcito in the wave-length range of 2-6 A., A., 1366. Derx, H. G. See Niel, C. B. van.

Desai, H. R. See Naik, K. G.

Desai, R. D. Seo Naik, K. G. De Saint-Aunay, R. V. Sco Mignonac, G.

De Samsonov, A. See Progrès Minier et Métallurgique S.A. De Santos, I., and West, A. P., chaulmoogryl-substituted phenols and ethyl-m-chaulmoogryloxybenzoate, A., 810.

chaulmoogryl-aminophenols and benzylamine, A., 1063. De Saulles, C. A. H., and American Smelting & Refining Co., recovery of zino oxide, (P.), B., 562.

Desbleds, L. B., eliminating eye estimates from colour measurements, B., 93.

Desborough, A. P. H. See Smith, F. E.

Desch, C. H., and Smith, B. S., third report on heterogeneity of steel ingots. IV. Interim report on the density of molten steel, B., 600.

Deschamps, R. See Milward-Licquier, (Mme.).

Deschiens, M., viscosity in relation to cellulose acetates, B., 167. properties, analysis, and practical testing of cellulose acetates, B., 675.

Deseö, D. von, development of feetal blood in the cow. I. Volume, dry matter, and corpuscular hæmoglobin content of cow's blood. II. Feetal blood, A., 1324.

Deshusses, J. See Deshusses, L. A.

Deshusses, L., determination of the degree of fineness of Schweinfurth green, B., 906.

Deshusses, L. A., and Deshusses, J., principal Schweinfurth greens used for agricultural purposes, B., 905.

Deslandres, H., relations between the most intense radiations and the highest chemical elements in the luminous atmosphere of the sun, A., 223, 479. Desmarest, M. See Bridel, M.

Desmaroux, mixtures of alcohol and ethyl ether, A., 1227. chemical and ballistic stabilities of BAm and BD powders. II.—IV., B., 378.

loss in weight of B powders on storing at 50°, B., 873.

Desmarquest, L., manufacture of cellular building materials, (P.), B., 599.

De Smedt, J., X-ray analysis of solid carbon disulphide, A.,

De Smedt, J., Keesom, W. H., and Mooy, H. H., crystal analysis of

solid a nitrogen, A., 1130.

Desmet, (Mlle.) M., and Haeperen, (Mlle.) M. van, counting of

a-particles by Wulf's method, A., 230.

Desparmet, E. See Soc. anon. Assoc. Parisienne pour l'Ind. Chim. Dessauer Vertikal-Ofen Ges.m.b.H., and Bueb, W., production of a mixture of coal gas and water-gas, (P.), B., 87.

De Stubner, E. C., manufacture of pigments and pigmented products, (P.), B., 365.

manufacture of coloured or pigmented products having a

cellulosic base, (P.), B., 365.

Desvergnes, L., rapid determination of pieric acid in pastes obtained by the nitration of phenol, B., 74.

colour reaction of diphenylamine and detection of this compound in B powder, B., 199.

Désy, G. G., colorimetric determination of carbon disulphide in gas, B., 194.

De Teni, G., excretory function of the stomach. II. Excretion of hexamethylenetetramine by the stomach wall, A., 1480. blood changes caused by histamine, A., 1487.

De Toytot, L. U., apparatus for production of producer gas, (P.), B., 1040.

Detrick Co., M. H., furnace-wall construction, (P.), B., 343.

De Turk, E. E. Soc Catherwood, M. P.

Detzel, A. See Reindel, F. Deubel, A. See Jellinek, K. Deuel, H. J. See Nord, F.

Deulofeu, V., esters of a-bromopropionic and a-bromoisobutyric acids, A., 171.

esters of a-bromoisovaleric acid, A., 171. Deulofeu, V., and Selva, R. J., degradation of l-arabinose, A., 427, 1277\*.

Deulofeu, V. See also Zappi, E. V.

Deussen, E., composition of iron fluoride, A., 1027.
Deussen, E., and Hacker, P., mono- and sesqui-terpenes. X. Active caryophyllene, A., 931.

Deussener, L. See Eckhoff, W. Deutsch, H. See Consort. f. Elektrochem. Ind. G.m.b.H.

Deutsch, L., Thorn, I., and Selden Co., manufacture of transparent, hard, insoluble, and infusible condensation products from phenols and aldehydes, (P.), B., 903\*.

Deutsch, L., Seo also Hungária műtrágya, kénsav és vegyi ipar részvénytársaság.

Deutschberger, O. See Singer, K.

Deutsche Baboock & Wilcox Dampfkessel-Werke Akt.-Ges., fuel burners, (P.), B., 771.

Deutsche Babcock & Wilcox Dampfkessel-Werke Akt.-Ges., and Kollbohm, L., impact mills, (P.), B., 626.

Deutsche Bergin-Akt.-Ges. für Kohle & Erdölchemie. See Soc. Internat. des Combustibles Liquides.

Deutsche Erdöl Akt.-Ges., conversion of heavy into light hydrocarbon oils, (P.), B., 843.

Deutsche Gasglühlicht-Auer-Ges.m.b.H., white base for enamels and glazes, (P.), B., 247.

decomposition of ores of zirconium and other rare-earth metals, and of titanium, (P.), B., 288.

Deutsche Gasglühlicht-Auer-Ges.m.b.H., production of opacifying media from zirconium silicate, (P.), B., 519.

manufacture of dense and solid articles or appliances of zirconia or other highly-refractory oxides, (P.), B., 558.

purifying the exhaust gases of internal-combustion engines, (P.), B., 632.

seaming compound fabrics containing rubber, (P.), B., 750.

weatherproof paints, (P.), B., 924. Deutsche Gasglühlicht-Auer-Ges.m.b.H., and Hanseatische Apparatebau Ges., respiratory apparatus, (P.), B., 738.

Deutsche Gasglühlicht-Auer-Ges.m.b.H. See also D'Ans, T., and Sommer, F.

Deutsche Gesellschaft für Schädlings-bekampfung m.b.H. Sec Flury, F.

Deutsche Gold- & Silber-Scheideanstalt vorm. Roessler, preparation of sodium nitrogen compounds, (P.), B., 164. hardening iron and steel articles, (P.), B., 360.

medium for rendering enamel turbid, (P.), B., 683.

manufacture of 3-mitro-2-aminopyridine-5-sulphonic acid, (P.), B., 737.

Deutsche Gold- & Silber-Scheideanstalt vorm. Roessler, Zisch, W., and Herzog, E., oxygen-evolving preparations and their application for air purification, (P.), B., 1034.

Deutsche Gold- & Silber-Scheideanstalt vorm. Roessler. See also Scheller, E.

Deutsche Hydrierwerke Akt.-Ges., and Bakonyi, S., carrying out biochemical processes, (P.), B., 834.

Deutsche Werft Akt.-Ges., apparatus for separating impurities

from oils, (P.), B., 843.

De Vaney, F. D., and Coghill, W. H., beneficiation of oxidised manganese ores by magnetic separation of roasted jig concentrates, B., 899.

Devers, P. K. See General Electric Co.

De Vilmorin, J., and Cazaubon, E., [determination of sugar with] alkaline copper solutions [Fehling's solution], B., 489.

De Vore, H. B. See Cofman, V. De Vries, G. H., new method of defecating cane juices, B., 655.

De Vries, O., plasticity determinations in crude rubber. Changes in plasticity on keeping, B., 367. De Vries, O., and Beumée-Nieuwland, N., coagulation phenomena in *Hevea* latex. VII. Phenomena in alkaline latex, B., 366.

coagulation phenomena in Hevea latex. VIII. Rubber obtained by freezing latex, B., 366. coagulation phenomena in Hevca latex. VIII. Influence

of some heavy-metal salts on coagulation and coalescence, B., 651.

De Vries, O., Riebl, R., and Beumée-Nieuwland, N., cream from [rubber] latex, B., 366.

De Vries, T., modified Pirani gauge, A., 903. De Waele, A., cholesterol in the blood of the fresh-water mussel Anodonta cygnæa, A., 1477.

production of stencil sheets for use in duplicating, (P.), B., 14, 204. De Waele, A., and Lewis, G. L., plastometric studies on the

structure of surface layers, A., 881.

Dewar, M. M. See Neill, M. H.

Dewey, (Miss) J. M., spectral excitation by recombination in the electric arc, A., 224.

temperatures of positive ions in a uniformly ionised gas, A., 620. De Witt, C. B. See Hale, H.

De Witt, C. C., and Brown, G. G., continuous still for conductivity

water, A., 672.

De Witt, J., dc-inking of fibrous material, (P.), B., 470.

De Wolf, L., improvement of cellulosic materials, (P.), B., 849\*. De Wolf, P., evaporation, B., 542.

Dexter, W. J. Sco Broadhurst & Co., Ltd.

Dey, A. N., and Dutt, S., colour on the basis of molecular strain.
VI. Effect of sulphur on colour, A., 66.

dyes derived from quinoline-2-aldehyde, A., 75.

colour on the basis of molecular strain. VII. Effect of polymembered ring formation, A., 934.

Dhar, N. R., condition of iodic, hydrofluoric, and chromic acids and their salts in aqueous solutions, A., 135.

Dhar, N. R., and Ghosh, S., influence of electrolytes on the

viscosity of colloids, A., 761. Dhar, N. R., and Gore, V., change of precipitating concentrations

of electrolytes with the purity and temperature of some hydroxide sols, A., 506. Dhar, N. R., and Prakash, S., coagulation of blood and milk by

electrolytes and the similarity between the clotting of blood

and the formation of jellies, A., 506.

Dhar, N. R. See also Bhatia, L. S., Bhattacharya, A. K., Chakravarti, D. N., Chakravarti, S. N., Ghosh, S., Gore, V., Mehrotra, M. R., Mukerji, B. K., Palit, C. C., and Prakash, S.

Dhavale, D. G., are spectrum of phosphorus, A., 618.

Dhere, C., reaction tube, A., 533.

Dhere, C., and Baumeler, C., rufin, the epidermal pigment of Arion rufas, A., 839.

Dhingra, D. R., Hilditch, T. P., and Vickery, J. R., fatty acids and glycerides of kusum oil, B., 1022.

D'Huart, G., reagent for macroscopic metallography, B., 753. D'Huart, K., fundamental calculations for the flue-gas drum dryer, B., 761.

Diakova, M. See Petrenko-Kritschenko, P.

Diamond, C. See Courtaulds, Ltd. Diamond, H. See Terrey, H.

Diamond State Fibre Co. See McIntosh, J.

Diana, T. B., rapid determination of tin in lead-base alloys containing antimony, B., 647.

Díaz de Rada, F., direct volumetric determination of potassium and sodium, applicable to other alkali and alkaline-earth metals, A., 900.

Diaz Roldán, M. See Garcia Banus, A.

Dibrova, A., molecular structure and properties of homopolar compounds. II. Structure of the carbon atom and isomerism in homologous series, A., 972.

Di Capua, C., isotherms at 20° of the systems La(NO<sub>3</sub>)<sub>3</sub>-Mn(NO<sub>3</sub>).  $H_2O$ ,  $La(NO_3)_3$ - $Mg(NO_3)_2$ - $H_2O$ , and  $Mn(NO_3)_3$ - $Mg(NO_3)_2$ - $H_2O$ ,

Dice, (Miss) M. E., and Hildebrand, J. II., solubility. Solubilities of liquid stannic iodide in several liquid paraffins, A., 131.

Dick, J., rapid determination of various elements after precipitation by the classical methods, A., 901.

rapid gravimetric determination of cadmium as oxalate, A., 1412.

Dick, J. See also Spacu, G.

Dickens, A. H., Hugh, W. E., and Kon, G. A. R., three-carbon system. XX. cycloPentylideneacetone and cyclopentylidenemethyl cthyl ketone, A., 560.

Dickens, F., and Simer, F., tissue glycolysis; effect of fluoride and some other substances, A., 1489.

Dickens, F. See also Allan, H. Dickens, P., apparatus for working with exclusion of air or in a neutral atmosphere, A., 44.

[apparatus for] ultrafiltration, A., 44.

apparatus for the determination of silica in steel and iron by the chlorine method, B., 210.

Dickens, P. See also Thanheiser, G.

Dickerman, A. E., and Gasgo Power Corporation, apparatus for

making oil gas, (P.), B., 969.

Dickerson, W. H., and Industrial Waste Products Corporation, treatment of sugar solutions to increase the sucrose content, (P.), B., 655.

Dickerson, W. H. See also Marlatt, C. D. Dickey, J. B. See Gilman, H.

Dickie, H. A., solubility of carbide in ferrite, B., 853.

Dickie, W. A. See Brit. Celanese, Ltd. Dickie, W. S., calcination, B., 541.

Dickinson, R., influence of colloids on precipitation of salts, A.,

Dickinson, R. C. See Baxter, W. P.

Dickinson, R. G., and Dillon, R. T., Raman spectra of solutions

of some ionised substances, A., 741.
Raman spectrum of gypsum, A., 1216.
Dickinson, R. G., Dillon, R. T., and Rasetti, F., Raman spectra of polyatomic gases, A., 1215.

Dickinson, R. G. See also Dillon, R. T., and Tolman, R. C. Dickinson, W. P., and Marshall, P. G., isomeric monohydroxy-phenylalanines. I. New synthesis of the o- and m-isomerides and a comparison of their properties with those of tyrosine, A., 1068.

Dickinson, W. P. See also Dammick, D. L.

Dickinson, Ltd., A. J. See Groombridge, W. H.

Dickson, W., and Imperial Chemical Industries, Ltd., percussion caps and the like, (P.), B., 418.

Diebold, P., [laundry] drum-washing machines, (P.), B., 320.

Dieckmann, O., refining of petroleum oils, (P.), B., 466. Diederichs, W. J., and Westinghouse Electric & Manufacturing Co., annealing furnace, (P.), B., 479.

Diehl, K. See Emmert, B., and Schmücking, A.

Diehl, K. F. See Huebner, J. Diehl, R. See Köttgen, P.

Dieke, G. H., perturbations in the band spectrum of helium, A., 479.

difference between the absorption and the Raman spectrum,

properties of the terms of the helium molecule, A., 616.

structure of the band spectra of hydrogen and helium molecules, A., 1115.

terms of the hydrogen molecule, A., 1115.

properties of a class of molecular terms, especially terms of the holium molecule, A., 1116.

Dieke, G. H., Imanishi, S., and Takamine, T., new regularities in the band spectrum of helium. II. and III., A., 732, 1205.
Dieke, G. H. See also Schaafsma, A.

Diels, O., and Alder, K., syntheses in the hydroaromatic series. III. Syntheses of terpenes, camphors, hydroaromatic and heterocyclic systems, A., 819.

syntheses in the hydroaromatic series. V. A4-Tetrahydro-ophthalic acid, A., 1296.

Diels, O., and Alder, K. [with Naujoks, E.], syntheses in the hydroaromatic series. II. Cantharidin, A., 570.
Diels, O., and Alder, K. [with Pries, P.], syntheses in the hydroaromatic series. IV. Addition of maleic anhydride to arylated dienes, trienes, and fulvenes, A., 1297.

Diels, O., Alder, K., and Stein, G. [with Pries, P., and Winckler, H.], syntheses in the hydroaromatic series. VI. Partly hydrogenated naphtha- and anthra-quinones with hydrogen in the  $\gamma$ - or  $\delta$ -position, A., 1303.

Diemair, W., and Sichert, W., importance of hydrogen-ion concentration for the distillery. II. and III., B., 299, 907.
Diemair, W. See also Bleyer, B.

Dienerstein, Z. M., and Guenes, S., blood-nitrogen in sensitised animals, A., 1096. Dienert, F., purification of water by base exchange, B., 873.

Diénert, F., and Etrillard, P., sterilisation of water by chlorine, B., 380.

Dienisov, J., sulphur balance in the manufacture of sulphatecellulose, B., 892.

Dienst, K., improving the milling quality of grain, (P.), B., 737. Diepschlag, E., and Wulfestieg, F., electrical conductivity of magnesite and some other refractory materials in relation to the temperature and their other properties, B., 815.

Diergarten, H., determination of gases in metals, especially oxygen in iron and steel, by the hot-extraction method, B., 752. Diesenhaus, (Frl.) C. See Bobtelsky, M.

Dieterich, E. O., time- and temperature-plasticity relations for crude rubber, B., 827.

Dieterich, L. M., [producing the effect of relief or depth in] photography, (P.), B., 265. Dieterich, W. von. See Rhenania-Kunheim Ver. Chem. Fabr.

Dieterle, H., and Leonhardt, H., constituents of red sandal wood;

homopterocarpin and pterocarpin, A., 569. Dieterle, P., and National Aniline & Chemical Co., Inc., reduction

of aromatic nitro-compounds, (P.), B., 512. manufacture of 2-naphthol-3-carboxylie acid, (P.), B., 845.

Dieterle, W., Matthies, O., Mauerhoff, E., Reitstötter, J., and Agfa Ansco Corporation, preparation of photographic gelatin, (P.), B., 912\*.
Dieterle, W. See also Matthies, O.

Diethelm, B. See Stiner, O. Dietiker, M. See Strasser, E.

Dietrich, G., artificial silk-yarn mixtures, (P.), B., 593.

Dietrich, H. G., distribution of ammonia between water and chloroform at 25°, A., 256. Dietrich, K. R., and Jeglinski, H., examination of alcohol motor

fuels, B., 311.

fusel oil reaction [of the German pharmacopæia] for absolute alcohol and spirit, B., 387.

Dietrich, W. F. See Irving, D. R. Dietz, E. M. See Fieser, L. F. Dietzel, R., and Huss, W., stability of morphine in aqueous solution especially during sterilisation, B., 147.

Dietzel, R., and Schlemmer, F., examination of some drugs according to D.A.B. VI., B., 416.

Dietzel, R., Schlemmer, F., and Fischer, R., decomposition of alkaloids in aqueous solution, particularly during sterilisation: atropine, hyoscyamine, scopolamine, yohimbine, hydrastine, and hydrastinine, B., S69.

Dietzsch, F., treatment of ores for extraoting metallic values therefrom, (P.), B., 330\*

Di Franco, S., natrolite of Viagrande (Etna), A., 905

Di Frisco, A., action of substances containing alcoholic hydroxyl groups on pancreatic lipase, A., 1490.

Digby, W. P., [copper-iron] alloys [containing chromium], (P.), B., 984.

Dijatschkovski, S. I., factors of stability of colloidal systems, A., 1005.

Dijatschkovski, S. I. See also Dumanski, A. V.

Dikshoorn, R. P., 5- and 8-aminoquinolines, A., 329. derivatives of 5-aminoquinoline, A., 452.

derivatives of 8-aminoquinoline, A., 825.

nitration of N-2-pyridyl-N'-ethylcarbamide, A., 825.

quinolyl-2:4-dinitronaphthylamines, A., 825. halogenodinitroquinolines, A., 825.

Dill, D. B., Bock, A. V., Lawrence, J. S., Talbott, J. H., and Henderson, L. J., blood as a physico-chemical system. VIII. Diabetic coma, A., 594.

Dill, D. B. See also Dennig, H., Edwards, H. T., Hochrein, M., and Hurxthal, L. M.

Diller, F., purification of water, B., 873. Dillinger, J. See Smith, A. W.

Dillman, A. C., daily growth and oil content of flax seeds, A.,

Dillon, R. T., and Dickinson, R. G., Raman spectra from acetone, A., 1216.

Dillon, R. T., and Young, W. G., preparation of anhydrous hydrogen iodide, A., 1156.

Dillon,  $\overline{R}$ . T. See also Dickinson, R. G., and Young, W. G. Dillon, T., iodine liberator from Laminaria, A., 360.

Dillon, T., and Lavelle, E. F., utilisation of scaweed, B., 1043. Dilthey, W., reactivity of positive hydrogen atoms. III. Catalytic

reactions, A., 929. Dilthey, W., and Alfuss, W., heteropolar compounds of carbon.

VIII. Mcthoxytriphenylcarbenium salts, A., 1293. Dilthey, W., and Dinklage, R., heteropolar compounds of carbon. VII. Formulation of dye salts, A., 1067.

Dilthey, W., and Hölterhoff, E., silicic acids, A., 280.

Dilthey, W., Neuhaus, L., and Schommer, W., heteropolar compounds of carbon. IX. Action of the nitro-group on the halochromism of chalkones, A., 1300.

Dilthey, W., and Stallmann, B., reactivity of positive hydrogen atoms. II. Dibenzyl ketone, A., 928.

Dima, L. See Ripan, R.

Di Macco, G., and Formicola, P., effect of ethyl alcohol on dehydrogenation and on the oxygen demand of muscle, A., 845.

Di Mattei, P., and Dulzetto, F., histochemical demonstration of glutathione and its distribution in certain organs, A., 590. Dimler, M. C. Sce Arny, H. V.

Dimond, E. G., and Watson, E. E., electron scattering in helium, A., 368.

Dinerstein, L. Sec Abderhalden, E.

Dingemanse, E., and Wibaut, J. P., pharmacology of pyridyl-pyrroles and derivatives of 2-aminopyridine, A., 350.

Dingemanse, E. See also Laqueur, E. Dinger, K., origin of the strontium in the strata of the lower Muschelkalk and Röt formations near Jena, A., 905.

Dingle, H., spectrum of doubly-ionised fluorine (F III), A., 225. Dingmann, T. See Schenck, R. Dinklage, R. See Dilthey, W.

Dinsmore, R. P., stearic and oleic acids as rubber-compounding

ingredients, B., 827.

Dinsmore, R. P., and Goodyear Tire & Rubber Co., method of compounding caoutchouc, (P.), B., 612.

manufacture of synthetic rubber, (P.), B., 1024\*. Dinsmore, R. P. See also Goodyear Tire & Rubber Co.

Dip-It, Inc. See David, A., and Schlatter, E. R.

Dirac, P. A. M., quantum mechanics of many-electron systems, A., 622.

Dirks, B., and Scheffer, F., nutrient requirements of arable soils, B., 67.

Dirksen, R. See Chem. Fabr. anf Aktien (vorm. E. Schering), and Dohrn, M.
Dirr, K. See Felix, K.

Dirscherl, W., insulin. IV. Action of pepsin on insulin and its acetyl derivative, A., 357.

Dirscherl, W. See also Freudenberg, K.

Dische, Z., nature of the sugar combined with protein of bloodplasma, A., 89.

Dische, Z., determination of the carbohydrates in animal organs and in blood by characteristic colour reactions. I. Colour reactions of the carbohydrates and their use in the microchemical determination of different sugars in dilute solution, A., 341.

characteristic colour reaction of thymus-nucleic acid, A., 463.

Dischendorfer, O., and Polak, C., phytochemistry. V. allo-Betulin, A., 449.

Dischendorfer, O. See also Scholl, R.

Diserens, L. Sec Schenrer, Lauth & Cie.

Dishaus, I. See Wieland, H.

Di Stefano, F., detection of extracts and powders of medicinal plants in pharmaceutical preparations, B., 416. Distillers Co., Ltd., Bennett, W. G., and Peake, A. M., treatment

of molasses for yeast growth, (P.), B., 994.

Distillers Co., Ltd., and Hutchinson, H. B., production of butyl alcohol and acctone by fermentation, (P.), B., 954, 994.

Ditchburn, R. W., and Arnot, F. L., ionisation of potassium vapour, A., 735.

Ditmar, R., selenium-red [in rubber], B., 181.

production of lustrous spread rubbered material with the aid of vulcanisation by ultra-violet light, B., 294.

physical influence of sclenium-red on accelerated rubber mixtures, B., 367.

titanium dioxide in the rubber industry, B., 445.

influence of various accelerators on the surface vulcanisation of rubber by ultra-violet radiation, B., 692.

Ditmar, R., and Grünfeld, O., surface vulcanisation in ultra-violet light, B., 903.

Ditmar, R., and Mathiesen, A., activating effect of various metal oxides on the accelerating action of piperidine pentamethylenedithiocarbamate and cyclohexylethylamine dithiocarbamate in the vulcanisation of rubber, B., 863. Ditmar, R., and Preusze, K. H., use of Thénard's blue in accelerated

rubber mixtures, B., 863.

increased stretching capacity of dipped rubber articles (toy balloons, etc.) and decrease in number of dippings required for thick-walled dipped rubber articles resulting from the increased viscosity of rubber solutions containing sipalin, B., 949.

Ditmar, R., and Rachner, M., vulcanisation accelerators, B.,

Dittlinger Crow Co. See Crow, W.

Dittmar, H. R., decomposition of triphenylacetic acid by sulphurio acid, A., 656.

Ditz, H., bromometric determination of phenol and the cresols,

B., 510.

decomposition of water by ferrous hydroxide and the formation of hydrogen in potash deposit works, B., 679.

Ditzel, F. See Ziegler, K. Dixmier, G. See Aubert.

Dixon, B. E., determination of small quantities of beryllium in rocks, A., 668.

Dixon, H. H., [floating mercury on water], A., 641.

Dixon, H. H., and Bennet-Clark, T. A., electrical excitation and the possible structure of the plasmatic membrane, A., 1381.

Dixon, H. H., Davenport, H. A., and Ranson, S. W., muscle contraction. II. Distribution of phosphorus in frog muscle during delayed relaxation, A., 718.

calcium content of muscular tissue during parathyroid tetany, A., 1332. Dixon, H. H. See also Davenport, H. A.

Dixon, H. W. A., colloid-treating apparatus, (P.), B., 497.

preparing carbon dopes, (P.), B., 770. Dixon, J. K. See Foote, H. W.

Dixon, J. T., treatment of gelatin, (P.), B., 369.

Dixon, M., and Elliott, K. A. C., effect of cyanide on the respiration of animal tissues, A., 1197. Dixon, M., and Meldrum, N. U., crystalline tripeptide from living

cells, A., 1334.

D'Leny, W., and Imperial Chemical Industries, Ltd., regenerating

active carbon, (P.), B., 915.

Dmochowski, A., changes in the nuclear-plasmic ratio of vertebrate poikilotherms during hunger, A., 95. changes in the nuclear-plasmio ratio of mammals during

hunger, A., 95. Doak, B. W., mineral constituents of lucerne, A., 1346. value of sulphur for fertilisation of lucerne, B., 866.

3

Doat, H., and Compagnie Générale des Conduites d'Eau, Société Anonyme, production of unhardened [white iron] castings in metal moulds, (P.), B., 329.

Dobbelstein, O., drying or smouldering of loose material, (P.), B.,

apparatus for drying, charring, and otherwise treating loose

material, (P.), B., 635\*, 670\*.

Dobben, P. W., Mulder, J. G. W., Oosterhuis, E., and Naamlooze Vennootschap Philips' Gloeilampenfabrieken, incandescence cathode (P.), B., 689\*.

Dobbenburgh, W. J. D. van. See Cohen, E., and Kolkmeijer, N. H.

Dobbie,  $G.\ C.\ G.$  See Armstrong, D. Dobbins,  $J.\ T.$  See Mebane,  $W.\ M.$ 

Dobmaier, K. See I. G. Farbenind. A.-G.

Dobronravov, N., Lukirsky, P., and Pavlov, V., cosmic radiation and radioactive disintegration, A., 621.

Dobrovorskaja, R. See Galvialo, M. J. Dobrovolny, F. J. See Lauer, W. M.

Dobrovolska, S., oxidation of uric acid in presence of hydrogen acceptors, A., 829.

Dobryanski, A., Arkhangelski, B., and Stepanyan, R., propylene from crude oil, B., 930.

Dobson, G. M. B., atmospheric ozone, A., 1263.

Dobson, G. M. B., Harrison, D. N., and Lawrence, J., amount of ozone in the earth's atmosphere and its relation to other

geophysical conditions. III., A., 419.

Dobson, G. M. B. See also Götz, F. W. P.

Dobson, W. P., and Barnes, A. S. L., oxygen and hydrogen in industry, B., 938.

Dodd, A. S., boron compounds in fruits and vegetable products,

A., 362.

test for boric acid and borates, A., 668.

Dodds, E. C. See Allan, H. Dodds, H. H., Fowlie, P., and McRae, D., field experiments with fertilisers for sugar cane, B., 336.

Dodge, H., treatment of hides and skins, (P.), B., 568.

Dodonov, J., and Soschestvenskaja, E., occurrence of pyridine bases in the tar oils from Russian bituminous schists, B., 545.

Dodson, E., means for separating air, vapour, and volatile fluids from liquids, (P.), B., 499.

Doeblin, F., chemically resistant and machinable copper alloys, (P.), B., 133.

Doell, T. W. See Cushman, O. E.

Doelter, C., blue rock salt, A., 1035.
Dömötör, J., rapid determination of the oil content of paprika, B., 575.

Döpel, R. See Hirsch, R. von. Doerell, E. G., fertilising with iodine, B., 184.

phosphoric acid requirements of Czechoslovakian soils, B., 406.

Doerinckel, F. See I. G. Farbenind. A.-G. Doerner, H. A., determination of molybdenum, A., 165.

Dörr, E. See I. G. Farbenind. A.-G.

Doerschuk, V. C. See Carborundum Co.

Dœuvre, J., uso of ozone for the determination of the constitution of unsaturated compounds, A., 542.

 $\beta$ -methyl- $\Delta\beta$ -hepten- $\zeta$ -ol and natural d-citronellol, A., 907. r-citronellol, A., 1038.

secondary citronellol [ $\beta\zeta$ -dimethyl- $\Delta\beta$ -octen- $\eta$ -ol], A., 1266. Dogadkin, B., dispersoidal properties of some salts of the plasma,

A., 838.

Dogadkin, B., and Yanovskaya, B. I., colour reaction for vitamin-C. I. Dispersion and behaviour of substances specific for Bezssonov's reagent towards various adsorbents, A., 1497.

Doglov, B. See Ipatiev, V. N. Doherty, J. See Grimes, M.

Doherty Research Co. See Bjerregaard, A. P., Isham, R. M.,

Lowe, R. E., and Merley, S. R. Dohme, A. R. L., and Sharp & Dohme, Inc., production of alkylresorcinols, (P.), B., 227\*

manufacture of heptylresorcinols, (P.), B., 911. Dohrn, M., Dirksen, R., and Schering-Kahlbaum Akt.-Ges., production of pyridine derivatives [3:5-di-iodo-2-hydroxy-pyridine], (P.), B., 454\*.

Dohrn, M. See also Chem. Fabr. auf Aktien (vorm. E. Schering).

Dohse, H., and Kälberer, W., heterogeneous splitting reactions, A., 1231.

Dokkenwadel, F. G., Millner, T. W., Walley, V. R., Stevens, B. M., Fishel, E. C., and Green, J. E., insecticidal plant food or fertiliser, (P.), B., 733.

Doladilhe, M. See Bontaric, A. Doladugin, A. I. See Sachanov, A. N.

Dolch, M., and Gieseler, K., pump for circulating gas of various kinds through a closed system, A., 1261.

Dole, M. See Falkenhagen, H., Jones, G., and MacInnes, D. A. Dole, W. See Richards, T. W. Dolejšek, V., and Engelmannova, (Mile.) O., spark doublets in

the K-series, A., 226. Dolejšek, V., and Filčáková, H., complexity of the  $K\beta'$  line of

X-ray spectra, A., 376. Dolejšek, V., and Pestrecov, K., discontinuities of the K-absorption of simple substances, A., 225.

fine structure of the K-edge, A., 492.

Dolgov, C. A., analysis of lime, B., 1043. Dolley, P. T. See California Cyanide Co., Inc.

Dollinger, L. L., air filter, (P.), B., 741. Dolphon, J. R. See Crabtree, J. A.

Dolter, H. See Germain, F.

Domanicki, M., preparation of finely-dispersed colloidal gold, A., 1003.

Dominick, J. F., and Lauter, C. J., methylene-blue and bromocresol-purple in differentiating bacteria of the colon-aerogenes group, B., 836.

Dominikiewicz, M., structure of leucite and of complex kaolinates, A., 420.

benzidine reaction in mineralogical analysis, A., 1033.

Domke, R. See Neumann, B.

Dommer, O., apparatus for determining the calorifie value of gases, (P.), B., 771\*.

Domontovitsch, M. K., and Groschenkov, A. J., effect of dark and light periods on the nutrition of plant roots, B., 788.

Dona, G., rapid determination of the dry extract in vinegar, B., 735. Donahue, T. H., and Friek, F. F., flotation agents, (P.), B., 725. Donald, E. B. See Auty, C. M. Donaldson, J. G., Coles, H. L., and Guardian Metals Co., refractory

material, (P.), B., 395.

Donaldson,  $\hat{J}$ .  $\hat{G}$ ., and Guardian Metals Co., composite articles for safe or vault construction, (P.), B., 440.

Donaldson, J. G. See also Coles, H. L. Donaldson, J. W., heat-treatment and volume changes of grey cast iron between 15° and 600°, B., 357. thermal conductivities of grey cast irons, B., 475.

Donat, J. See Scholl, R.
Donat, K. See Kahn, O., and Philipp, K.
Donath, E., and Leopold, H., cause of failure of brickwork, B., 434. **Dondain,** A., bleaching [cotton] without chemicking, B., 715.

Donegan, J. F. See Krebs, H. A.

Donhoffer, S., and Mitta-Donhoffer, M., rôle of reducing colloids in blood-sugar determination, A., 1477. Donhoffer, S. See also Jendrassik, L.

Donk, E. van. See Waddell, J.

**Donnan**, F. G., physical chemistry in the service of biology, A., 1103.

Donnelly, J. F., conversion of hydrocarbon oils, (P.), B., 548\*. Donnelly, J. T., Foott, C. H., and Reilly, J., gas analysis, B., 421. effect of pre-oxidation on primary distillation products of coal. VI. The tars, B., 703.

Donnelly, R. P., and Hinshelwood, C. N., combination of hydrogen and oxygen on the surface of platinum, A., 1150.

Donner, A., preservation of liquid eggs, egg yolk, or egg white, (P.), B., 338.

Donomae, I., influence of insulin on diabetic lipamia, A., 1482. Donovan, P. P. See Pringsheim, H. Dony-Henault, O., thermal and electrothermal reduction of zinc

oxide, B., 647.

Dooley, D., appearance of noble gases in vacuum tube discharges A., 1126.

Dootson, P. See Baddiley, J. Doppée, E. H., manufacture of steels and castings, (P.), B., 479. Dorabialska, A., heat of  $\beta$ - and  $\gamma$ -radiation of radium, A., 116, 971\*

application of adiabatic microcalorimeter to measurement of the heats of radiation of uranium, thorium, and radioactive minerals, A., 1358.

Doran, W. See Bose, A. C.

Dorcam Maché Co., Ltd. See McCord, S. F.

Dorcas, M.J. See Cooper, W.C., jun. Dorée, C., and Barton-Wright, E.C., lignosulphonic acid obtained from spruce wood by the action of sulphurous acid in presence of ammonia, B., 166.

Dorfan, M. I., and Allis-Chalmers Manufacturing Co., apparatus for treating [metallic] fumes, (P.), B., 23.

Dorfman, J., and Jaanns, R., rôle of conductivity electrons in ferromagnetism, A., 127, 751.

Dorfman, J., and Kikoin, J., rôle of conductivity electrons in ferromagnetism, A., 751.

Dorman,  $\tilde{C}$ . See Deatrick, E. P.

Dorman, Long & Co., Ltd., and Kirby, M. R., liquid sprayers, (P.), B., 876.

Dormer, J. A., and Malone, J. G., crusher, (P.), B., 78.

Dorn,  $C_{ij}$ , and Burdin,  $J_{ij}$ , thickening of oils for use in the varnish industry, B., 609.

Dornauf, J., cadmium as corrosion preventive for light metals, Dorner, B., extracting cellulose-containing materials from the

sudd or papyrus plant, (P.), B., 894. Dorner, B. See also Euromeriean Cellulose Products Corp. Dorner, O. See Fischbeck, K.

Dornte, R. W., partial pressures of binary solutions, A., 1228. Dorp, G. C. A. van, and Naamlooze Vennootschap Soc. Chem. Ind. "Katwijk," extraction of theobromine from natural products,

(P.), B., 699\*.
Dorr, J. V. N., conversion of batch into continuous processes, B.,

541. Dorr Co. See Coe, H. S.

Dorrington, B. J. F., and Ward, A. M., potassium cyanate as a reagent for detection of cobalt, A., 901.

Dorsch, K. E., and Kallmann, H., formation of monatomic hydrogen by collisions with slowly moving electrons, A., 483. Dort, R. G. See Dreyfus, C.

Dorta, G. See Fachini, S.

Dortman, W. A., ion antagonism in colloidal models. I. Regularities in ion antagonism in the coagulation of hydrophilic sulphur sols. II. Influence of anions on the antagonism of cations in the coagulation of hydrophilic sulphur sols, A., 28.

Dos Santos, N., effect of tin on tubercle bacillus, A., 958. Dossmann, A., treatment of tinned scrap iron, (P.), B., 59, 822\*. Doting, J. S., combustion temperatures of sulphur, pyrites, and zine blende, B., 899.

Dott, D. B., acctylsalicylic acid, B., 416.

decomposition of acctylsalicylic acid in alkaline solution, B., 536.

Dotti, L. B. See Scott, E. L. Douchy. See Drachoussof. Dougan, C. E. See Brassert, H. A.

Dougherty, G., catalytic activity of aluminium chloride, A., 421. Dougherty, G. Sco also Gleason, A. H.

Dougherty, G. T., determination of iron oxides in acid steel-furnace

slags, B., 778.

Doughty, H. W., and Lacoss, D. A., chloroacetic acids and zinc, A., 540.

Doughty, L. R., Engledow, F. L., and Sansom, T. K., yield in cereals. VI. A. Influence of nitrogenous top-dressing on wheat. B. Influence of disease ("take-all") on the yield of wheat, B.,

Doughty, R. H. See Baird, P. K.

Douglas, A. V., astrophysical estimate of the ionisation potential

of vanadium, A., 483.

Douglas, R. W. See Proctor, R. F.

Douglas, W. A., and Du Pont de Nemours & Co., E. I., concentration of ores and minerals by flotation, (P.), B., 23.

Douglas, W. A. See also Du Pont de Nemours & Co., E. I. Douris, R., Mondain, C., and Plessis, M., differentiation between normal and pathological sera; ease of oxidation of sera, A., 465. Douthitt, F. H., desiccation of substances, (P.), B., 191. Douty, A. Sco Gravell, J. H.

Douwesdekker, K., and Nikola, P. C., alkaline defecation-carbonatation process for clarifying cane juices, B., 371.

Dovan Chemical Corporation. See Weiss, M. L. Dovel, J. P., blast furnaces, B., 23, 330\*.

blast furnace; apparatus for protection of blast-furnace jackets,

(P.), B., 439. Dow, M. H., Lord Kelvin's law in chemical manufacture, B., 419. Dow, R.  $\underline{B}$ ., influence of surface conditions on the friction of

metals, B., 328. Dow Chemical Co. See Britton, E. C., Burdick, E. E., Gann, J. A., Grether, E. F., Griswold, T., jun., Hale, W. J., Heath,

S. B., and Strosacher, C. J.

Dowd, W. E., jun., and Power Specialty Co., regenerative air heater, (P.), B., 305.

Down, R. A. R. See Davies, W.

Downard, J. S., asphalt paving composition, (P.), B., 898. Downes, J. R., and Miller, S. F., sludge-digesting apparatus, (P.),

Downing, G. V. See Whitmore, L. M. Downs, C., and Bellwood, R. A., sterilising and drying of fish materials and fish waste, (P.), B., 995.

Downs, C. E. See Harding, V. J. Downs, C. R. See Weiss, J. M. Downs, W. F., manufacture of anhydrous metallic chlorides, (P.), B., 433.

Downs, W. F., apparatus for treatment of mineral oils, (P.), B., 669.

Dox, A. W., and Jones, E. G., direct substitution on the nitrogen of 5:5-dialkylbarbituric acids, A., 330

Dox, A. W., and Parke, Davis, & Co., chloro-n-amylmalonamide,

(P.), B., 797. Dox, A. W. See also Hjort, A. M., and Lyons, E.

Doying, E. G. See Ray, A. B. Doyle, A. F. See Mahin, E. G. Doyle, R. J., and Ryan, H., periodic precipitation in presence and absence of colloids, A., 1144

Doyle, R. J. See also Ryan, H. Doyle, W. T., and Sturtevant Mill Co., apparatus for pulverising

materials, (P.), B., 740, 838.

Drabkin, D. L., and Waggoner, C. S., hæmoglobin maintenance on synthetic diets, A., 1476.

Drachoussof, and Douchy, volumetric method of determining phosphoric acid in alkali and alkaline-earth phosphates and in phosphates of iron and aluminium, A., 42.

Dräger, E., protective gas masks, etc., (P.), B., 38, 266, 540.

Draganesco, S. See Marinesco, G.

Dragendorff, O. See Wieland, H.

Dragone, G. T., fluorescence of vegetable juices in filtered ultra-

violet rays, A., 611.

Dragunov, S. S. See Britzke, E. V.

Drake, E. T. See Parsons, L. B.

Drake, J. W. See Drakes, Ltd.

Drake, N. L. See Harden, W. C. Drakeley, T. J., and Nicol, H., absorption of oxygen by dilute alkaline solutions of pyrogallol, B., 355.

Drakeley, T. J., and Pollett, W. F. O., china olay as reinforcing agent in rubber compounding, B., 444. Drakeley, T. J. See also Pollett, W. F. O.

Drakes, Ltd., and Drake, J. W., [protective lintel for doorways of] producer and like furnaces, (P.), B., 314.

settings for vertical retorts used in the production of gas, etc., (P.), B., 1040.

Drane, H. O. H., clastic constants of fused quartz; change of Young's modulus with temperature, A., 499

Drangsholt, C., manufacture of materials suitable for addition to toilet baths, (P.), B., 662.

Drawe, R., manufacture of gas of high calorific value, (P.), B., 45. Dreaper, W. P., [guider-starter for] spinning of artificial silk and the like, (P.), B., 514. manufacture of artificial silk yarns, (P.), B., 1011.

manufacture of composite yarns, (P.), B., 1011. Dreger, E. E. Seo Clarke, H. T., and Hartman, W. W.

Dreifuss, M. See Tausz, J.
Dreisbach, J. W., air separator, (P.), B., 308.

Dresel, K., and Sternheimer, R., rôle of lipins in the vegetative system. I. Antagonistic influence of the physico-chemical state of lipin sols, A., 102.

Dresel, K., Sternheimer, R., and Himmelweit, F., rôle of lipins in the vegetative system. V. Effect of adrenaline on the serumlecithin and -cholesterol, A., 102.

Dresel, K., Sternheimer, R., and Hirsch, R., rôle of lipins in the vegetative system. IV. Effect of lipins on the blood picture, A., 102.

Dressler, C., vulcanisation [of rubber], (P.), B., 566.

Dressier, P. d'H., and American Dressier Tunnel Kilns, Inc., gasification [of coal], (P.), B., 272.

Dreving, V. P. See Sokolov, P. I.
Drew, H. D. K., non-existence of isomerism among dialkyl-

telluronium dihalides, A., 546.

Drew, H. D. K., and Porter, C. R., micro-determination of selenium and tellurium in organic compounds, A., 1323.

Drew, R. B. See Brit. Glues & Chemicals, Ltd.

Drew, W. R. M. See Lee, D. H. K. Drewes, K., participation of micro-organisms in the dissolution of insoluble phosphates, A., 850.

68 Dreyer, K. L. See Tammann, G. Dreyfus, C., Dort, R. G., Platt, H., and Celanese Corporation of America, treatment of vegetable fibres in presence of organic derivatives of cellulose, (P.), B., 848\*.

Dreyfus, C., Platt, H., and Celanese Corporation of America, differential coloured fabric and its manufacture, (P.), B., 514. weighting fibres of cellulose derivatives, (P.), B., 970\*. Dreyfus, H., manufacture of artificial silk, artificial horse-hair, etc. [from cellulose derivatives], (P.), B., 14\*. manufacture of acetic acid, (P.), B., 200\*, 388\*. manufacture of aliphatic [acetic] anhydrides, (P.), B., 275, 670, 671, 708, 888 manufacture of fatty acid [acotic] esters of cellulose of high viscosity, (P.), B., 470\*. manufacture of filaments or threads of cellulose derivatives, (P.), B., 513. treatment of cellulosic material; manufacture of cellulose derivatives, (P.), B., 514\*. manufacture of cellulose esters and articles made therefrom, (P.), B., 593. manufacture of collulose esters, (P.), B., 594, 750. manufacture of artificial [silk] products by dry-spinning processes, (P.), B., 594. manufacture of [alkoxy-]aliphatic acids, (P.), B., 671. manufacture of anhydrides of alkoxy-aliphatic acids, (P.), B., 671, 888. manufacture and treatment of cellulose esters, (P.), B., 714. production of cellulose esters and cellulose ester products therefrom, (P.), B., 750.

manufacture of hydroxy-aliphatic acids [and derivatives] or salts thereof, (P.), B., 807. manufacture and treatment of cellulose derivatives, (P.), B., 848. manufacture of artificial textile filaments or fibres, (P.), B., 937. treatment of cellulose prior to esterification, (P.), B., 976\*. manufacture of yarns, filaments, ribbons, fabrics, etc. from organic derivatives of cellulose, (P.), B., 1011. Dreyfus, H., Haney, C. I., and Celanese Corporation of America, concentrating lower aliphatic acid solutions, (P.), B., 123\* collulosic material and product obtained therefrom, (P.), B., 242\*. Dreyfus, H. See also Brit. Celanese, Ltd. Dreyfuss, W., calcium metabolism in animals, A., 599. Dreyfuss, Y. See Leulier, A. Dreyspring, C., and Krügel, C., comparative pot experiments with superphosphate, "reform phosphate," "plutophos," "moorphos," and two Polish raw phosphates, B., 409.

Dreyspring, C., Krügel, C., and Pantke, R., root-solubility of phosphoric acid contained in superphosphate, neutral phosphate, reform phosphate, and Algiers phosphate, B., 1048. Drinker, C. K. See Went, S. Driscoll, J. O. See Gibson, G. C. Driver, J. E., and Thompson, S. P., strychnine hydrochloride, B., Drobatschev, A. See Martinet, J. Drössel, A. See Jonas, K. G. Drossbach, O. See I. G. Farbenind. A.-G. Drossbach, P., calculation of theoretical combustion temperatures, A., 33. calculation of the [electrode] potentials of potassium and sodium, A., 268. Droste, W. H., and Werner, M., now accelerated [weathering] test for paints, B., 609. Drotschmann, C., reaction between manganese dioxide and ammonium chloride, A., 658. zinc foil for the Leclanché cell, B., 251. Drozdov, N. S. See Uedinov, M. N. Druce, J. G. F., reduction of naphthol-yellow by stannous chloride, A., 553. Druce, J. G. F., and Fowles, G., preparation of cuprous sulphate, A., 156. Drucker, C., adsorption and gas-friction, A., 1376. electrolytic dissociation, A., 1384. Drucker, J. See I. G. Farbenind, A.-G. Drum, J. See O'Donoghue, B. Drumm, P. J. See Reilly, J. Drummond, A. A. See Morgan, G. T.

A., 609.

1202.

Drummond, J. C. See also Guha, B. C. Drury, A. N., and Szent-Györgyi, A., influence on the heart of a substance present in heart muscle and other tissues, A., 475. Drury, C. D., and Fall, F. P., feeding frames and lids for retortbench producers, furnaces, etc., (P.), B., 971. Druten, A. van, action of phosphorus trichloride on formic acid and acetic anhydride, A., 540. luminescence of sound Dutch lard in ultra-violet light, B., 607. Druyvesteyn, M.J., ionisation by collision in a uniform electric field, A., 735. afterglow of lamps containing neon, argon, and a mixture of neon with a little argon, A., 1206. Dryice Corporation of America, manufacture of carbon dioxide snow, (P.), B., 95. producing solid blocks of carbon dioxide ice, (P.), B., 323. Dubaquié, J., clarification of natural sweet wines by centrifuging, B., 34. heating of the vintage, B., 534. graphical method for calculating the composition of a sugar mixture [sucrose, dextrose, levulose], B., 791. Dubbs, C. P., and Universal Oil Products Co., apparatus for treating oils, (P.), B., 46. treatment [cracking] of hydrocarbon oils, (P.), B., 508, 548, 1041. Dubey, V. S., and Holmes, Arthur, estimates of the ages of the Whin Sill and the Cleveland Dyko by the helium method, A., 622. Dubinin, M., adsorption phenomena in solutions. XVII. Modifications of active carbon, A., 389. charcoal as an adsorbent. II., A., 999. Dubinin, M. See also Schilov, N. Du Bois, E., manufacture of carbonic snow [solid carbon dioxide], (P.), B., 283. Du Bois, E., and Chemische Fabrik vorm. Sandoz, increasing the affinity of animal fibres for dyes, (P.), B., 243. Du Bois, E. F. See McClellan, W. S. Dubois, P. See Delaby, R., and Geloso, M. Dubois, R., properties of Fournier's photo-electric cells, A., 145. Dubos, R. J., decomposition of cellulose by aerobic bacteria, A., 101. rôle of carbohydrates in biological exidations and reductions; experiments with pneumococcus, A., 1341. Dubourg, J. See Dupont, G. Duboux, M., and Parchet, L., micro-determination of chlorides in scrum and cerebrospinal fluid by the method of electrical conductivities, A., 838. Dubreuil, R. See Roulier, C.
Du Bridge, L. A., systematic variations of the constant A in thermionic emission, A., 3. thermionic emission from clean platinum, A., 229. Dubrisay, R., and Astier, suspensions of kaolin, A., 26. Dubrisay, R., and Saint-Maxen, A., autoxidation of quinol, A., 1397. Dubrisay, R., Trillat, J. J., and Astier, suspensions of kaolin in various media, A., 877. Dubský, J. V., and Brychta, F., complex salts of diacetyldioxime, A., 543, 796\*.

Dubský, J. V., and Kuraš, M., dissonitrosoacetone as a sensitive reagent for ferrous iron, A., 1414. Dubský, J. V., and Rabas, A., additive compounds of organic bases with salts of heavy metals, A., 1461. Duccheschi, V., soya-bean meal in the human dietary, A., 95. purine bases of the seed and meal of the soya bean, A., 107. layered sedimentation of suspensions of crythrocytes, A., 764. Duckham, (Sir) A. McD. See Woodall-Duckham (1920), Ltd. Duclaux, J., colloidal structure in the solid state, A., 393. ultra-filter membrane, (P.), B., 40\*. metallic complexes of nitrocellulose, B., 91. manufacture of ultra-filter membranes, (P.), B., 762\*. Duclaux, J., and Nodzu, R., fractionation of cellulose esters, B., Duclaux, J., and Titeica, R., micelles and membrane equilibria, A., 1003. Ducloux, E. H., iron of Sumampa and other pseudometeorites, A., 1163. meteoric stone of Hinojo, Buenos Aires, A., 1418. El Mocovi meteorite, A., 1419. Cachari metcoric stone, A., 1419. Drummond, J. C., and Baker, L. C., chemical nature of vitamin-A, Ducloux, E. H., and Pastore, F., Renca (San Luis) meteorite, A., 1419. Drummond, J. C., and Morton, R. A., assay of vitamin-A, A., Ducrue, H. See Maurer, E. Dudek, H. See Steinkopf, W.

Dudley, H. W., acetylcholine, A., 1479.

Düring, W. See Bergmann, L. Düringer, F. See Hantzsch, A.

Dürr, H. See Steidle, H.

Dürr, W. See Freudenberg, K.

Duerr, W. A., and Cabot Co., apparatus for [air] separation of solids, (P.), B., 1000.

Düwell, H., and Solon, K., boiling of [sugar] thin juice, and determination of natural alkalinity, B., 952.

Dufay, J., absorption spectra of oxygen and of ozone in the ultraviolet region, A., 225.

colour photography and kinematography, (P.), B., 378.

Duff, J. C., and Bills, E.J., basic chlorides and additive compounds from metallic chlorides and hexamothylenctotramine; exceptional behaviour of nickel chloride, A., 545.

Duffek, V., apparatus for testing liability to corrosion, B., 289. Duffek, V. See also Liebreich, E.

Duffendack, O. S., and Black, J. G., spectra of Cu 1, Cu 11, and Mn 11 by means of a vacuum tungsten furnace, A., 966.

Duffendack, O. S., and Smith, H. L., simultaneous ionisation and excitation of diatomic molecules by impacts with positive ions and excited atoms, A., 969.

Duffendack, O. S., and Wolfe, R. A., excitation of the arc spectrum

of nitrogen, A., 1116. Duffield, F. L., gas producer, (P.), B., 47\*.

gas-producing and oil-recovery plant; combustion chambers, (P.), B., 272.

reduction of ores, (P.), B., 287.

roasting and reduction of metallic [iron] ores, (P.), B., 360. reduction of ones of metals capable of volatilisation, (P.), B., 522. briquetting or consolidation of sponge-iron granules, (P.), B.,

Dufford, R. T., luminescence associated with electrolysis, A., 378. efficiencies in luminescence accompanying electrolysis, A., 1364.

Dufilho. See Barthe, L.

Dufraisse, C., and Gillet, A., stereochemistry of the phenyl styryl ketones; ethylenic isomerism and polymorphism of the phenyl a-bromo-β-alkoxystyryl ketones, A., 700.

Dufraisse, C., and Netter, R., steroochemistry of the phenyl styryl ketones; the sterooisomerism of phenyl α-bromo-βethoxystyryl ketone, A., 1072.

Dufraisse, C. See also Moureu, C.

Dufrenoy, J., double staining of mitochondria and bacteria in plant tissues, A., 478.

cytological study of water-soluble and fat-soluble constituents

of Citrus, A., 961.

Dufton, A. F. See Fishenden, M.

Duftschmid, F. Soo Fleissner, H.

Duhamel, E. C., washing of wool, (P.), B., 677\*.

washing wool and other textile materials, (P.), B., 677\*. Duhamel, E. C., and Compagnie Générale des Industries Textiles,

washing or cleaning of wool, (P.), B., 469. Duisberg, W. See Grasselli Dyestuff Corporation. Dulière, W., phosphagen [in muscle], A., 466.

condition of creatine in amphibian voluntary muscle, A., 1480.

Dull, M. F. See Chamberlain, J. S.Dulzetto, F. See Di Mattei,  $\hat{P}$ .

Dumanski, A. V., and Buntin, A., tartaric acid method for the synthesis of electronegative sols. V. Sulphide sols, A., 760.

Dumanski, A. V., Čescheva, Z., and Banov, A., luminous effect

in electrolysis at mercury electrodes, A., 979.

Dumanski, A. V., and Chalisev, A. A., tartaric acid method for the synthesis of electronegative sols. II. Colloidal nature of Fehling's solution, A., 259.

Dumanski, A. V., and Dijatschkovski, S. I., tartaric acid method for the synthesis of electronegative sols. V. Physico-chemical properties of tartaric acid tungsten colloids, A., 760.

Dumanski, A. V., and Jakovlev, A., tartaric acid method for the synthesis of electronegative sols. III. Adsorption of sodium tartrate and succinate by aluminium hydroxide, A., 760\*.

tartaric acid method for the synthesis of electronegative sols. VIII. Adsorption of d- and i-sodium tartrate by aluminium hydroxide, A., 877. tartaric acid method for the synthesis of electronegative sols.

IV., A., 1003\*.

Dumanski, A. V., and Putschkovski, B. S., refractive indices of

hydrosols, A., 1142.

Dumanski, A. V., and Scherschnev, P. A., protective action of silicic acid sols and of tin hydroxide on silver sols, A., 394.

Dumas, G., and Soc. Anon. des Chaux et Ciments de Lafarge et du Teil, apparatus for manufacture of cement by fusion, (P.), B.,

Dumitrescu, (Mlle.) V. See Voicu, J. Du Mond, J. W. M., structure of the Compton shifted line, A., 123.

Compton modified line structure and its relation to the electron theory of solid bodies, A., 747.

Du Mont, H. See Helferich, B.

Dumont, P., and Bouillenne, M., micro-determination of bismuth, A., 1033.

Dumoulin, A., control of polarisation losses in [beet] sugar manufacture, B., 733.

Dumskaya. Sco Dumski.

Dumski, A. I. See Tilitseheev, M. D. Dunaeva, O. K. See Pamfilov, A. V.

Dunaeva, S., detection of sulphurous acid with Bettendorf's reagent, A., 284.

inhibiting action of catalysts on the decomposition of hydrogen peroxide, A., 657.

Dunbar, T. L., Richter, A. F., and Chemipulp Process Inc., digestion of fibrous material, (P.), B., 320.

Duncan, A. B. F., decomposition of thallic oxide, A., 1387.

Duncan, C. W. See Tartar, H. V.
Duncan, H. M. See Parsons, (Sir) C.
Duncan, S. W., manufacture of cassava meal, (P.), B., 71. Duncan, W. M., rotary [tubular] furnace, (P.), B., 1035. Duncklee, F. P. See Hultman, E. W. Duncombe, G. H., jun. See Arnold, R. E.

Dunez, A. See Lesure, A. Dunham, H. V. See Bradshaw, L. Dunham, J. L., intensities in the harmonic band of hydrogen chloride, A., 1126.

Dunham, R. A., and Union Oil Co. of California, treatment of spont clays [from oil-treating processes], (P.), B., 197.

Dunham, R. W., manufacture of wheaten flour, (P.), B., 535.

maturation of wheat, maize, pulse, and other carbohydrate-

containing cereals and seeds, and the flour or other similar products derived therefrom, (P.), B., 575.

Dunham, T., jun., and Moore, C. E., predicted lines of Cr 11 in the

spectra of the sun and of a Persei, A., 366.

Dunin, M. S., and Schemjakin, F. M., morphology of chemical reactions in colloidal media, A., 645.

formation of secondary systems of Liesegang rings. II., A., 879. reactions between silver nitrate or copper sulphate and potassium ferrocyanide in gelatin, A., 1008.

Dunkel, M., calculation of intermolecular forces of organic compounds, A., 129. Dunkin, D. D., grading of material, (P.), B., 306.

Dunlop, D. M., examination of the gastric contents as an aid to diagnosis of carcinoma of the stomach, A., 594.

Dunlop Rubber Co. Ltd., Alcock, H. J., Anode Rubber Co. (England), Ltd., Koopman & Co., and Aktiebolaget Separator, preparation of concentrated india-rubber latex, (P.), B., 990.

Dunlop Rubber Co., Ltd., Chapman, W. H., and Lane, F. H., manufacture of articles from aqueous dispersions containing organic materials, (P.), B., 446.

Dunlop Rubber Co., Ltd., Chapman, W. H., and Patterson, P. D., incorporation of fillers and other compounding ingredients, and of gas black, into rubber latex or the like, (P.), B., 652.

Dunlop Rubber Co., Ltd., and Davies, R. C., production of goods made from aqueous dispersions of rubber and similar materials, (P.), B., 335.

production of creams and pastes from aqueous dispersions of

rubber or rubber-like materials, (P.), B., 367.

Dunlop Rubber Co., Ltd., and Fellowes, F., manufacture of articles [rubber tubes] containing material at one stage plastic, and particularly extrusion of the plastic content, (P.), B., 295. Dunlop Rubber Co., Ltd., McKay, R. F., and Chapman, W. H.,

deposition of organic materials [rubber, etc.] from aqueous dispersions containing these materials and articles manufactured therefrom, (P.), B., 139.

Dunlop Rubber Co., Ltd., and Madge, E. W., deodorisation of articles produced by the electrophoresis of latex mixings, (P.),

B., 612,

Dunlop Rubber Co., Ltd., Murphy, E. A., and Twiss, D. F., manufacture of articles from rubber or similar materials, (P.), B., 30.

manufacture of goods from aqueous dispersions of or containing rubber and similar resins, (P.), B., 220.

Dunlop Rubber Co., Ltd., Murphy, E., A., and Twiss, D. F., manufacture of tubes from india-rubber, gutta-percha, balata, or similar materials, or compounds thereof and apparatus therefor; manufacture of transparent vulcanised rubber, (P.), B., 220.

production of sheet rubber, gutta-percha, balata, and other analogous vegetable resins and fabrics coated therewith,

(P.), B., 220.

attachment of india-rubber or the like to metal or other surfaces, (P.), B., 368.

concentration of drying of liquids [e.g., aqueous dispersions], (P.), B., 459.

direct production of thread or tubes from concentrated com-

pounded latex, (P.), B., 612.

manufacture of articles substantially made of organic materials from dispersions, emulsions, or solutions containing the said organic materials, (P.), B., 828.

coating of solid surfaces [with rubber, etc.], (P.), B., 828.

Dunlop Rubber Co., Ltd., Neale, A. E. T., and Thomas, F., manufacture of rubber compositions, (P.), B., 612.

Dunlop Rubber Co., Ltd., and Paull, W. H., formation of articles by deposition from anulcions of rubber conditions. by deposition from emulsions of rubber and viscose or oxycellulose compounds, (P.), B., 220.

Dunlop Rubber Co., Ltd., and Trevaskis, H., electroplating of annular articles and apparatus therefor, (P.), B., 217.

Dunlop Rubber Co., Ltd., and Trobridge, G. W., production of articles made of fabric coated, proofed, or impregnated with organic materials, and of sheetings of organic materials, (P.), B., 485.

manufacture of articles from dispersions of organic materials

[e.g., rubber latex], (P.), B., 828.

Dunlop Rubber Co., Ltd., Trobridge, G. W., and Murphy, E. A., production of articles substantially made of organic materials from aqueous dispersions containing such materials, (P.), B.,

Dunlop Rubber Co., Ltd., and Twiss, D. F., manufacture of articles of rubber and similar substances from aqueous dispersions containing such substances, (P.), B., 105.

Dunlop Rubber Co., Ltd., Twiss, D. F., and Thomas, F., reclam-

ation of rubber, (P.), B., 295.

Dunlop Rubber Co., Ltd., and White, E. E., coating of solid surfaces [with synthetic resins], (P.), B., 863.

Dunlop Rubber Co., Ltd., Willshaw, H., Goodhall, S. N., and Folliss, C., treatment of gut or other strings or strands, (P.), B., 30.

Dunn, D. See Green, E. W. Dunn, E. T. See Howard, F. C.

Dunn, J. S., oxidation of tungsten; evidence for the complexity of tungstic oxide, WO3, A., 889.

Dunn, J. T., and Bloxam, H. C. L., boric acid in oranges, A., 362. Dunne, J. See Ryan, H.

Dunnicliff, H. B., Aggarwal, A. L., and Hoon, R. C., system ammonium sulphate-sulphuric acid-ethyl alcohol, A., 31

Dunnicliff, H. B., and Joshi, J. N., inhibition of certain photochemical reactions by oxygen, A., 522.

Dunnicliff, H. B., and Mohammad, S., action of hydrogen sulphide on solutions of nitric acid, A., 1253.

Dunnieliff, H. B., and Soni, C. L., action of hydrogen sulphide on chromates. I., A., 282.

Dunnicliff, H. B., and Suri, H. D., volumetric determination of mercury, A., 1031.

Dunnicliff, H. B., Suri, H. D., and Malhotra, K. L., action of

bromine on strontium oxide and its hydrates, A., 157.

Dunning, F., and Farinholt, L. H., mercurated halogen compounds of sulphonfluorescein, A., 586.

Du Nouy, P. L., viscosity of blood-serum as a function of temperature, A., 338.

rotatory power of serum as a function of temperature, A., 461. Dunstan, A. E. See Anglo-Persian Oil Co., Ltd., Auld, S. J. M., and Beale, E. S. L.

Duomarco, J. See Fuentes, B. V.

Duparc, L., Wenger, P., and Cimerman, C., nitridation of manganese, A., 897.

Duperier, A. See Cabrera, B.

Duperu, A. M., regeneration of kieselguhr, (P.), B., 671. Dupin, (Mlle.) M. See Boutaric, A.

Dupont, C., action of alkali chloride on plants and soils, B., 31. Du Pont, E. See Du Pont, F. I. Du Pont, F. I., Du Pont, E., and U.S.F. Powder Co., manufacture of smokeless [flashless] explosives, (P.), B., 75\*.

Dupont, G., and Dubourg, J., oxidation by air of abietic acid,

Dupont, L., manufacture of synthetic camphor, (P.), B., 1032\* Du Pont Cellophane Co., Inc., moisture-proof [cellulose] material, (P.), B., 715.

Du Pont de Nemours & Co., E. I., [softener for use with] cellulose ester [coating] compositions, (P.), B., 50. printing with vat dyes, (P.), B., 169.

cellulose ester or ether compositions, (P.), B., 293.

production of ketonic alcohols ["diacetone alcohol"], (P.), B.,

nitrocellulose solutions, etc., (P.), B., 483. ammonia oxidation and catalyst therefor, (P.), B., 517\*.

manufacture of esters and other valuable organic compounds, (P.), B., 549.

distillation of glycerol, (P.), B., 635.

production of glycerol, and of alcohol and glycerol, by fermentation, (P.), B., 867.

colour printing pastes and their manufacture, (P.), B., 976\*. coating of articles, (P.), B., 989.

synthetic resins and compositions prepared therefrom, (P.), B.,

high concentration of nitric acid, (P.), B., 1014.

Du Pont de Nemours & Co., E. I., and Bergeim, F. H., explosive, (P.), B., 152.

cyano-nitrate explosive, (P.), B., 152.

production of erythritol tetranitrate, (P.), B., 152 Du Pont de Nemours & Co., E. I., Black, C. O., and Moore, W. A., explosive, (P.), B., 662.

Du Pont de Nemours & Co., E. I., Booge, J. E., and Coolidge, C., modification of drying oils, (P.), B., 862

Du Pont de Nemonrs & Co., E. I., Booge, J. E., and Koller, J. P., reduction of [barium] sulphate minerals and briquettes therefor, (P.), B., 171.

Du Pont de Nemours & Co., E. I., and Bowers, P. C., purification of phthalic anhydride, (P.), B., 973.

Du Pont de Nemours & Co., É. I., and Bradshaw, H., photographic film, (P.), B., 378.

Du Pont de Nemours & Co., E. I., Bradshaw, H., Nollau, E. H., and Woodbridge, R. G., nitrocellulose composition, (P.), B., 530.

Du Pont de Nemours & Co., E. I., Bridgwater, E. G., and Slack, A. S., treatment [vulcanisation] of rubber, (P.), B., 652. Du Pout de Nemours & Co., E. I., Calcott, W. S., and Daudt, H. W.,

manufacture of tetra-alkyl lead [lead tetraethyl], (P.), B., 427.manufacture of benzoates, (P.), B., 550.

Du Pont de Nemours & Co., E. I., Calcott, W. S., Douglas, W. A., and Hayden, O. N., retarding deterioration of rubber, (P.), B.,

Du Pont de Nemours & Co., E. I., Calcott, W. S., and Parmelee, A. E., stabilisation of lead tetra-alkyl and its compositions, (P.), B., 939.

Du Pont de Nemours & Co., E. I., and Daudt, H. W., manufacture of lead tetraethyl, (P.), B., 709.

manufacture of benzoic acid, (P.), B., 888.

Du Pont de Nemours & Co., E. I., Daudt, H. W., Parmelee, A. E. and Monroe, K. P., manufacture of lead tetra-alkyl, (P.), B., 897.

Du Pont de Nemours & Co., E. I., and Davis, C. W., oxidation of ammonia, (P.), B., 432.

Du Pont de Nemours & Co., E. I., and Hitt, M. V., nitrocellulose coating composition, (P.), B., 786.

Du Pont de Nemours & Co., E. I., and Jordan, H., blue tetrakisazodyes for cotton, (P.), B., 711.

[manufacture of] disazo-dyes, (P.), B., 974. orange to brown [direct] disazo-dyes and their manufacture,

(P.), B., 974. preparation of [direct] trisazo-dyes, (P.), B., 809.

Du Pont de Nemours & Co., E. I., Kern, J. G., and Sala, C. J.,

colour printing paste, (P.), B., 716. Du Pont de Nemours & Co., E. I., and Lazier, W. A., catalytic preparation of oxygenated carbon compounds, (P.), B., 163. [catalyst for] catalytic preparation of oxygenated carbon com-

pounds, (P.), B., 235. Du Pont de Nemours & Co., E. I., and Lindsay, W. J., calcination of lithopone, (P.), B., 444.

Du Pont de Nemours & Co., E. I., and Lulek, R. N., intermediates of the 1:9-anthrathiazole series, (P.), B., 709.

Du Pont de Nemours & Co., E. I., and McDermott, F. A., production of glycerol by fermentation, (P.), B., 867\*.

Du Pont de Nemours & Co., E. I., and Middleton, E. B., acylation of carbohydrates, (P.), B., 242.

Du Pont de Nemours & Co., E. I., and Nobel Industries, Ltd., varnishes, etc. [artificial leather], (P.), B., 728.

Du Pont de Nemours & Co., E. I., and Parmelee, A. E., recovery of disubstituted guanidines, (P.), B., 888. manufacture of β-naphthol-1-sulphonic acid, (P.), B., 889.

Du Pont de Nemours & Co., E. I., and Rose, R. E., manufacture of softener for silk, (P.), B., 555.

Du Pont de Nemours & Co., E. I., and Schwartz, G. L., cellulose nitrate plastic, (P.), B., 774. Du Pont de Nemours & Co., E. I., and Scott, W., manufacture of

vulcanised rubber, (P.), B., 829. Du Pont de Nemours & Co., E. I., and Stine, C. M., coating com-

positions [containing rubber], (P.), B., 826. Du Pont de Nemours & Co., E. I., Stine, C. M., and Booge, J. E.,

coating composition and its manufacture, (P.), B., 691. Du Pont de Nemours & Co., E. I., Stine, C. M., and Coolidge, C., coating compositions [containing rubber], (P.), B., 826.

coating composition, (P.), B., 826. Du Pont de Nemours & Co., E. I., Stine, C. M., Coolidge, C., and

Middleton, E. B., paint and varnish liquid and its manufacture, (P.), B., 691.

Du Pont de Nemours & Co., E. I., and Taylor, G. B., absorption apparatus [for exothermic reactions], (P.), B., 495.

Du Pont de Nemours & Co., E. I., and Woodward, H. E., trisazo-[developing] dye and its production, (P.), B., 809. Du Pont de Nemours & Co., E.I., and Zeisberg, F.C., manufacture

of esters and other valuable organic products, (P.), B., 661\*. Du Pont de Nemours & Co., E. I. See also Douglas, W. A.,

Powers, D. H., and Taylor, G. B.

Du Pont Pathé Film Manufacturing Corporation. See Clément, L. E., Landucci, Z., and Zelger, G. E.

Du Pont Rayon Co., and Bradshaw, W. H., manufacture of rayon,

artificial horsehair, films, etc., (P.), B., 168. Du Pont Rayon Co., and Gladding, E. K., treating artificial fibres [in cake form] with liquids, (P.), B., 775.

Du Pont Vitacolor Corporation. See Kelly, W. V. D.

Dupuy, H., apparatus for distillation of solid matters, (P.), B., 3.

Duquenne, C., pulverulent-fuel furnace, (P.), B., 154

Durand & Huguenin Société Anonyme, production of dyeings and printings by means of vat dyes, (P.), B., 280. manufacture of [mordant] azo-dyes, (P.), B., 317.

dyeing and printing by means of vat dyes [soluble leuco-esters], (P.), B., 320.

Durand & Huguenin Société Anonyme. See also Bader, M. Durbin, H. R., and International Cement Corporation, production of Portland cement, (P.), B., 284.

Dure, H. F. See Delbridge, T. G.

Duriron Co., Inc. See Parsons, J. A., jun.
Durrans, T. H., determination of the m. p. of resins, B., 690. Durrant, P. J., constitution of the cadmium-rich alloys of the

system cadmium-gold, A., 398. Haughton-Hanson thermostat, method of fine adjustment, A.,

417. D'Urso, S. See Minunni, G.

Duschak, L. H., and Oliver Continuous Filter Co., separation of precious metals and copper from cyanide solution, (P.), B., 399. Duschek, F., vitamin content of silo juices, B., 32.

Dutcher, R. A. See Bechdel, S. I.

Dutel, A. M. See Altwegg, J.

Dutoit, P., manufacture of phosphorus pentasulphide, (P.), B.,

Dutoit, P., and Zbinden, C., spectrographic analysis of the ash of blood and organs, A., 952.

Dutt, E., decolorisation of shellac or other lac resins, (P.), B., 826. Dutt, S. See Chakravarti, S. N., Dey, A. N., Ghatak, N., Kaul, R., and Roy, A.C

Dutta, A. See Ghosh, S.

Dutta, D. N. See Guha, P. C.

Duval, (Mme.). See Duval, C

Duval, A. J. P. See Aubert, P. F. M.

Duval, C., cobaltic monoammine, A., 283. Duval, C., and Duval, (Mme.), cobaltipentammines and a new case of isomerism, A., 1254.

Duval, H. A. M. See Aubert, P. F. M.

Duval, M., seasonal variation of the carbon dioxide content of the blood of the snail, A., 205.

Duvall, S., pulverising mill, (P.), B., 626. Du Vigneaud, V. See Bergmann, M.

Dvorkovitz, P., manufacture of carburetted water-gas, (P.), B., 8. retort for treating carbonaceous matter, (P.), B., 425\*

Dvornikoff, M. N., ammonium salt of acetylsalicylic acid, B., 416. Dwight & Lloyd Metallurgical Co. See Hyde, R. W., and Lloyd, R. L. Dworzak, R., and Enenkel, A., a-bromo- and a-hydroxy-aldehydes. II. Bromination of valeraldehyde, A., 297.

Dworzak, R., and Herrmann, K., cyclic acctals. II., A., 1042.

Dworzak, R., and Lasch, T. M., cyclic acctals. I. A., 421.

Dworzak, R., and Pierri, J., a-bromo- and a-hydroxy-aldehydes.

IV. a-Hydroxy-n-butaldehyde, a-hydroxy-sobutaldehyde, and glycollaldehyde, A., 1166.

Dworzak, R., and Prodinger, W., a-bromo- and a-hydroxy-aldehydes. III. Crystalline lactaldehyde and its behaviour towards dilute aqueous alkalis, A., 297.

bromination products of isobutaldehyde, A., 1425.

Dworzak, R., and Reich-Rohrwig, W., analytical studies of pyrophosphoric acid; [determination of pyrophosphate in presence of orthophosphate], A., 667.

Dwyer, T. A. W., Schundler, H. O., Botsford, W. H., and James, A. J., rotary retort; distillation [of carbonaceous materials], (P.), B., 384.

Dyche-Teague, F. C., production of plastic products from india-

rubber, (P.), B., 334.

Dyckerhoff, E. See Schmidt, E.

Dyckerhoff, H. See Grassmann, W.

Dye, M., and Crist, J. W., relation of soil fertility to vitamin-A content of leaf lettuce, A., 1344

Dye, M. See also Crist, J. W., and Schimmel, S.
Dyer, H. T. See Peabody Engineering Corporation.
Dyes, W. A., influence of air in the manufacture and preparation of pure cellulose for high-quality viscose rayon, B., 389.

Dyk, K. See Loeb, L. B.

Dykstra, F. J. See Pope, J. C.

Dyrenfurth, F., detection and determination of oxygen in the pulmonary and intestinal gases of cadavers. A., 589. Dyson, G. M., vibration theory of odour, B., 36.

odour and constitution among the mustard oils [thiocarbimides]. V. Blending of mustard oils, B., 188.

odour and constitution among the mustard oils [thiocarbimides]. VI. Natural mustard oils, B., 264.

Dyson, G. M., Hunter, R. F., and Soyka, C., aminobenzthiazoles.

XI. Synthesis of 5:4'-disubstituted l-anilinobenzthiazoles from nuclear-substituted thiocarbanilides, A., 582

Dyson, G. M., and Renshaw, A., manufacture of ureas and thioureas of the naphthalene series, (P.), B., 807.

Dziewoński, K., Geschwindovna, O., and Schimmer, L., naphthalic acid derivatives, A., 444.

Dziewoński, K., and Koewa, A. [with Geschwindovna, O.],

naphthalic acid derivatives, A., 186.

Dziewoński, K., and Leonhard, K., phenyl-a- and -β-acenaphthylmethanes (5- and β-benzylacenaphthenes), A., 56.

Dziewoński, K., and Moszew, J., peri-dibenzylnaphthalene and two isomerides, A., 56. peri-dibenzylnaphthalene and two other isomeric hydrocarbons,

A., 1054

Dziewoński, K., and Wulffsohn, A., 2-methylnaphthalenes. III. A., 803.

E.

E.M.S. Industrial Processes, Ltd. See Salerni, P. M. Eadie, G. S., adrenaline and hyperglycemia, A., 959.

Eagle, H., mechanism of complement fixation, A., 1097.

titration of complement, A., 1097.

Eagle, H., and Brewer, G., mechanism of hamolysis by complement. I. Complement fixation as an essential preliminary to hæmolysis, A., 1097.

Eagle Picher Lead Co. See De Horvath, Z.

Eagles, B. A., and Cox, G. J., availability of ergothioneine in supplementing diets deficient in histidine, A., 94.

Eagles, B. A., and Vass, H. M., physiology of ergothioneine, A., 206. Earle, I. P., and Cullen, G. E., acid-base equilibrium of the blood.

I. Normal variation in  $p_{\rm H}$  and carbon dioxide content of bloodserum. II. Changes in acid-base equilibrium during the day, A., 1327

Earnshaw, W. D. See Bottomley & Emerson, Ltd., J. C.

Easley, M.A. See Spence, B.J.

Eastcott, E. V., isolation and identification of bios I; its absorption by and recovery from yeast, A., 472.

Easterfield, T. H., Rigg, T., Asken, H. O., and Bruce, J. A., xanthine calculi in sheep, A., 1099.

Eastern Alcohol Corporation. See Izsak, A., and McDermott, F.A.

Easterwood, H. W. See Waggaman, W. H. Eastman, E. D. See Cornish, R. E.

Eastman Kodak Co. Sce Clarke, H. T., Coke, O. W., Gray, H. Le B., and Sheppard, S. E.

Ebbutt, F., and Selnes, W. E., precipitation of copper from mine waters at Britannia Mines, B.C., B., 602.

Ebel, F., syntheses and degradations in tetrahydrodiphenylene oxide series, A., 450.

Ebel, F., and Bretscher, E., effective binding forces in polyatomic molecules, A., 744.

mutual dependence of binding forces between atoms, A., 745. Ebel, F., Brunner, R., and Mangelli, P. O., norcarane, A., 312. Ebel, F., Huber, F., and Brunner, A., derivatives of Bz-tetra-

hydrocoumarone, A., 323. Eberhard, R., reducing or arresting rust on iron or steel surfaces, (P.), B., 214.

Eberlin, L. W. See Sheppard, S. E.

Ebers, K., bleaching of raw heavy spar, (P.), B., 472\*. Eberson, F., and Wolff, Ernest, tuberculin fractions prepared from non-protein culture media, A., 1342.

Ebert, C. See I. G. Farbenind. A.-G. Ebert, F., reduction of the time of photographic exposures, especially in X-ray work, A., 535.

Ebert, F., and Hartmann, H., crystal structure of strontium and

barium, A., 631. Ebert, F. See also Ruff, O. Ebert, H. L. See Lange, N. A.

Ebert, L., and Lange, J., dependence of the osmotic coefficients on the structure of the ions of the tetra-alkylammonium salts,

Ebert, R. See I. G. Farbenind. A.-G.

Eccles, A., formation of methyl sodiochloromalonate and its reaction with iodine; stability of halogenoethanes, A., 295.

Eccleston, E. S., centrifugal separator, (P.), B., 800. Eccott, E. N., and Linstead, R. P., lower olefinic acids. I. n-Hexenoic acids, A., 1271.

Echeverria, J., and De Pedro, S., Pinus Hamiltoni [for paper-

making], B., 810. Echevin, R., and Crepin, A., determination of sulphur and phosphorus in vegetable tissues, A., 106.

Eck, L., removal of tar fog from gases, B., 6. vulcanisation [of rubber] without sulphur, B., 786. Eckart, C., continuous X-ray spectrum, A., 1120.

Eckart, O., characterisation of bleaching clays, B., 897. Eckdahl, W. P., wet process for manufacturing cement, (P.), B., 174.

Eckel, J. F. Sec Herty, C. H., jun. Eckell, J. Sec Thiel, A.

Eckermann, R., decreasing the toxic action of cocaines, (P.), B.,

Eekert, A., rubicene, A., 690.

reduction products of 1:1'-dianthraquinonyl, A., 702. Eckert, A., and Klinger, M., polyiodoanthraquinones, A., 701. Eckert, F., and Sendlinger Optische Glaswerke G.m.b.H., Röntgen tube, (P.), B., 401.

Eckert, F. See also Kleinfeller, H.

Eckert, W. Sco Grasselli Dyestuff Corporation.

Eckhardt, F., and Hohnekamp, M., electric incandescence lamp, (P.), B., 606.

Eckhoff, W., and Deussener, L., treatment of castings to be enamelled, (P.), B., 399. Eckles, C. H. See Palmer, L. S.

Eckman, J. R., and Rossini, F. D., heat of formation of sulphur dioxide, A., 1388. Eckstein, H., purification of gaseous chlorine, B., 812.

Eckstein, H. C., influence of diet on body-fat of white rats, A.,

influence of ingestion of trihexoin on body-fat of the white rat, A., 1484.

Eckstein, L., influence of pressure and addition of foreign gases on the absorption in activated neon, A., 224.

Eckstein, O., and Jacob, A., potash-iron antagonism in plants as the basis of a method for the determination of the potash requirement of soils, B., 788.

Eclipse Textile Devices, Inc., Garey, J. P., and Hasbrouck, L. B., apparatus for [multi-colour] dyeing, (P.), B., 849.

Economy Fuse and Manufacturing Co. See Cherry, O. A. Eda, G., effect of ergotamine on experimental hyperglycamia, A., 600.

influence of ergotamine on the blood-sugar, A., 956.

Eddington, A. S., sub-atomic energy, A., 117. charge of an electron, A., 231.

formation of absorption lines [in stellar spectra], A., 865.

Eddison, W. B., separation of liquids and solids, (P.), B., 928. Eddy, C. E., passage of  $\beta$ -rays through matter, A., 234. Eddy, C. E., Laby, T. H., and Turner, A. H., analysis by X-ray

spectroscopy, A., 867.

Eddy, C. O., and Geddings, E. N., determination of hydrogen cyanide in fumigation experiments, B., 962.

Eddy, C. W., intermittent extraction apparatus, A., 673.

Eddy, N. B., regulation of respiration. XXVII. Effect on salivary secretion of varying carbon dioxide and oxygen con-

tent of inspired air, A., 715.

Eddy, W. H., Kohman, E. F., and Halliday N., vitamins in canned foods. VII. Effect of storage on vitamin value of canned spinach, B., 450.

Edelgussverband G.m.b.H. See Hanemann, H., and Pivovarsky, E. Eden, T., and Fisher, R. A., crop variation. VII. Response of the potato to potash and nitrogen, B., 488.

Eder, J. M., light standard for sensitometry, and the Davis-Gibson light filter with copper-cobalt solutions, A., 892.

magnesium light as a normal light source for photographic sensitometry and its connexion with the international sunlight standard, A., 902, B., 623.

Eder, R., manufacture of polysulphides of aromatic carboxylic acids and esters thereof, (P.), B., 889.

Eder, R., and Sack, A., determination of glycyrrhizic acid in liquorice root and extract, B., 1031.

Ederer, S., and Wallerstein, J., specific dynamic action, A.,

Edgar, G., and Calingaert, G., analytical reactions of lead tetraethyl, A., 1474.

Edgar, G., and Calingaert, G. [with Marker, R. E.], isomeric heptanes. I. Proparation. II. Properties, A., 789. Edgar, G. See also Pope, J. C.

Edgcombe, L. J. See King, J. G.

Edge, S. R. H., rosin sizing [of paper], B., 279\*. absorptive power of cellulose, B., 713.

Edgeworth-Johnstone, R., [bi-polar] electrolytic cell, (P.), B., 362. Edlefsen, N. E. Seo Lawrence, E. O.

Edlen, B., precision measurements in the K-series of the elements zinc (30) to ruthenium (44), A., 227.

Edlén, B., and Ericson, A., vacuum spark spectra in the extreme ultra-violet down to 100 A., A., 1350.

Edlung, A. S. See Sieurin, S. E. Edmunds, C. W., Lovell, H. W., and Braden, S., bio-assays; tincture of Strophanthus, B., 059.

Edwards, C., jointing [refractory] cements, B., 980. Edwards, C. L. T., and Bethlehem Steel Co., blast furnace, (P.),

Edwards, H. T., Hochrein, M., Dill, D. B., and Henderson, L. J., physico-chemical system of blood in relation to respiration and circulation. III. Ionic distribution during rest and work, A., 1094.

Edwards, H. W., total reflexion of X-rays from nickel films of various thicknesses. I. and II., A., 123, 629.

Edwards, J. C., measurement of the interfacial tension of oils, A., 758.

interfacial tension measurements in the examination of insulating oils, B., 400.

Edwards, J. D., and Taylor, C. S., solution potentials of aluminium alloys in relation to corrosion, B., 983.

Edwards, J. D. See also Taylor, C. S.

Edwards, P. R., fermentation of maltose by Bacterium pullorum, A., 101.

Edwards, R. S., and Rumford Chemical Works, treatment of acidulous by product calcium sulphate, (P.), B., 643. Edwards, W. A. M. See Simon, F.

Edwards, W. R., electric cells, (P.), B., 824.

Edwin, E., manufacture of gaseous mixtures of nitrogen and hydrogen [for ammonia synthesis], (P.), B., 815\*.

Edwin, E. See also A./S. Norsk Staal (Elektrisk-Gas-Reduktion). Eegriwe, E., detection of magnesium by means of dyes, A., 530. detection of aluminium by dye reagents, A., 531. Efimov, V., and Rehbinder, P., boundary surface energy and

activity in a protoplasm model, A., 1335.

Effected, D. See Raeder, M. G. Effector, N. N., viscosity of binary liquid systems, A., 130.

Efremov, N. N., and Narkevich, M. M., manufacture of Epsom salts, B., 775.

Efremov, N. N., and Rozenberg, A. M., removal of ferrous chloride from solutions of commercial zinc chloride, B., 812. Efremov, N. N., and Tichomirova, A. M., equilibria of certain

binary systems containing 2:4:6-trinitro-m-xylene, A., 130. compounds of tetryl with hydrocarbons, A., 180.

Efremov, N. N., and Veselovski, A. A., bromine content of Solikamsk carnallites, A., 1163.

Efremoy, N. N., and Yakimetz, E. M., use of Ganelin's method in the treatment of Altai lead ores, B., 753.

Eger, G., electrolytic recovery of metals, B., 560, 753\*. Egerton, A. C. See Asiatic Petroleum Co., Ltd.

Egeter, H., determination of sugar in bagasse by cold extraction: new figure for milling control, B., 573.

Egg, C., and Jung, A., sterilising action of silver and copper on

bacteria, A., 1494. Egg Patents, Ltd. See Bellamy, A. J.

Egge, H.J., production of cdible paste from the liver of cod fish, etc., (P.), B., 956.

Eggert, J., and Noddack, W., quantum efficiency for the action of X-rays on silver bromide. II., A., 124.

Eggert, J. See also Arens, H. Eggert, W., jun., treatment of cotton plants, (P.), B., 336.

Eggerth, A. H., germicidal and hemolytic action of a-bromosoaps, A., 725.

Egleson, J. E., and General Chemical Co., treatment of solid materials with liquid reagents, (P.), B., 39.

Egli, H., and Akt.-Ges. Secriet, imparting a linen-like effect to cotton, (P.), B., 204.

Egli, H. W., now camphor bases. I. Two isomeric ketimides of camphoric acid imide. II. Condensation of a-aminocamphor with  $\gamma$ -diketones and  $\gamma$ -keto-esters, A., 571.

Eglin, J. M., direct-current amplifier for measuring small currents,

Egloff, G., treatment [cracking] of hydrocarbons, (P.), B., 198. cracking of light oils, B., 422.

[production of] high-value anti-knock fuels by cracking lowtemperature coal tar, B., 503.

Egloff, G., Benner, H. P., and Universal Oil Products Co., apparatus for treating emulsified oil, (P.), B., 197.

cracking of emulsified petroleum oil, (P.), B., 465. cracking of hydrocarbons, (P.), B., 507.

cooling the heating coils of an oil-cracking apparatus, (P.), B.,

treatment of carbon from cracking stills, (P.), B., 933.

Egloff, G., Howard, W. R., and Universal Oil Products Co., apparatus for cracking oil, (P.), B., 507.
Egloff, G., and Lowry, C. D., jun., distillation methods, ancient

and modern, B., 913.

Egloff, G., Morrell, J. C., and Universal Oil Products Co., oxidation of hydrocarbons, (P.), B., 880. treatment of cracked hydrocarbons [containing sulphur], (P.),

catalytic treatment of hydrocarbon oil, (P.), B., 933.

Egloff, G., Schaad, R. E., and Lowry, C. D., jun., oxidation mechanisms of the parallin hydrocarbons, B., 930.

Egloff, G., and Universal Oil Products Co., cracking of [hydrocarbon] oil, (P.), B., 465, 508, 933.

cracking of [hydrocarbon] oil; cracking of petroleum oil, (P.), B., 508.

treating [cracked hydrocarbon] oils, (P.), B., 508. conversion [cracking] of petroleum oils, (P.), B., 744. catalytic cracking of hydrocarbons, (P.), B., 882. treatment [cracking] of hydrocarbons, (P.), B., 882. conversion of hydrocarbon oil, (P.), B., 883. apparatus for treating emulsified oil, (P.), B., 884.

Egloff, G. See also Morrell, J. C.

Egnér, H., cadmium as reducing agent in chemical analysis, A,

Egorov, M. A., lime and phosphoric acid in the soil, B., 406. conditions of application and of action of phosphates [on chernozem soils]. V. and VI. Reversion of phosphates in VII. Organic parts of the exchange complex, B., 757. Egorov, M. A., and Strelnikova, M. M., chernozem and argilla-

ceous soils, B., 693. Egorov, M. S., determination of ozone in air, B., 282.

Egorova, O. I., action of the oxides of nitrogen on ethers, A., 1422.

Egorova, V., action of metallic sodium on trimethylacetyl chloride. A., 49.

Eguchi, T., basic nitrogen compounds from Fushun shale tar. II., B., 6.

Ehmann, L. See Kuhn, R. Ehmcke, V. See Houdremont, E.

Ehrenberg, R., radiometric micro-analysis, A., 1258.

Ehrenberg, W., scattering of X-rays by graphite, A., 629. Ehrenberg, W., Ewald, P. P., and Mark, H., crystallographic optics of X-rays, A., 15.

Ehrenberg, W., and Jentzsch, F., release of photo-electrons by X-rays from metallic reflectors at angles bordering on total reflexion, A., 735.

Ehrenfeld, L., and Puterbaugh, M., [preparation of] o-nitroaniline, A., 1055.

Ehrenfest, P., and Rutgers, A. J., thermodynamics and kinetics of the thermo-electric effect in crystals, especially the Bridgman effect, A., 1135.

Ehrenreich, A., production of leather, (P.), B., 30. production of textile fibres of high quality from skins of fish such as, in particular, those of the Chondropterygii selachii, (P.), B., 554\*.

Ehrhardt, A. See I. G. Farbenind. A.-G.

Ehrhardt, K., melanophore hormone in the human pituitary, A., 1343.

Ehrhardt, V., simple thermionic valve apparatus for carrying out electrometric titrations, A., 1417.

Ehrhart, G. See Bockmühl, M.

Ehrismann, O., and Maloff, G., physiological effects of two poisons of the adrenaline series:  $\beta$ -hydroxy- $\beta$ -(4-hydroxyphenyl)-Nmethylethylamine, and the corresponding ketone, A., 96.

Ehrlich, F., and Kosmahly, A., pectins of fruit, A., 1347. Ehrlich, F., and Rehorst, K., d-glycuronic acid. II., A., 541. Ehrlich, F., and Schubert, Friedrich, relationship of tetra-araban to tetragalacturonic acid, the chief complex of pectin, A.,

pectin substances; tetragalacturonic acids and d-galacturonic acid from the pectin of the sugar beet, A., 1273.

Ehrmann, K., low-temperature tar from bituminous coal and its utilisation in the artificial resin, the varnish, and disinfectant industries, B., 1003.

Eibner, A., natural and artificial [weathering] experiments in testing the durability of oil-paints, B., 63. oil absorption in paint grinding, B., 103.

Eibner, A., and Laufenberg, W., value of lead pigments in iron protection, B., 104.

Eichengrün, A., production of filaments, threads, bands, ribbons, etc. from cellulose derivatives, (P.), B., 848. production of pressed masses from cellulose derivatives, (P.),

B., 893. Eichengrün, A., and Celanese Corporation of America, production of thin films of cellulose derivative, (P.), B., 91.

Eichholtz, F. See Hecht, G.
Eichler, F. See Tschunkur, E.
Eichler, O. See Anselmino, K. J.
Eichler, W. Sco Lottermoser, A.

Eichstädt, A. See Mrozek, O.

Eichwede, H., Fischer, Erich, Sieglitz, A., and General Aniline Works, Inc., manufacture of water-soluble arylazodiarylamine dyes, (P.), B., 1009\*. Eichwede, H. See also Grasselli Dyestuff Corporation.

Eickworth, R., burners for gas firing, (P), B., 10.

Eiderman, M., preparation of menthol from Ukrainian peppermint

oil, B., 537. Eifflaender. L. See Grasselli Dyestuff Corporation.

Einstein, O. See Ettisch, G. Einstein, W. I. See Ainstein, I.

Eisenbrand, J., ultra-violet light in quantitative chemical examination, A., 528.

ultra-violet colorimetry with the aid of fluorescent substances, A., 666.

limits of applicability of indicators in simple  $p_{\rm H}$  determinations. I. and II., A., 1157, 1255. protection of drugs susceptible to light by coloured glass. III.,

B., 339. Eisenhut, O., and Kaupp, E., spectral analytical determination of readily fusible and liquid substances by means of Lenard tubes.

A., 630. Eisenhut, O. See also I. G. Farbenind. A.-G. Eisenkolb, F., acid testing in [iron-]pickling baths, B., 778. Eisenmann, A. J., Van Slyke's method for determination of chlorides, A., 962.

Eisen- & Stahlwerk Hoesch Akt.-Ges., and Heidenhain, W., hardening iron, steel, and other ferromagnetic materials, (P.), B., 214.

Eisenstein, A., and Schicht Akt.-Ges., G., manufacture of linoleum covering material, (P.), B., 138.

Eisenwerk-Ges. Maximilianshütte, uniformly hardening the head of railway rails [by its immersion in water], (P.), B., 687.

Eiserson, L. See Peters, J. P.

Eisleb, O., and Winthrop Chemical Co., manufacture of alkamine esters of [N-substituted] o-aminobenzoic acids, (P.), B., 377\*.

Eisler, B., potassium: calcium ratio and magnesium content of cerebrospinal fluid, A., 840.

Eisler, B. See also Schittenhelm, A.

Eisler, M., genesis and character of bacterial poisons, A., 608.

Eisler, M., and Spiegel-Adolf, M., concentration of sera containing anti-bodies by physico-chemical methods; (electrodialysis and adsorption), A., 340.

Eisner, G., and Lewy, F., absorption of lavulose by red bloodcorpuscles, A., 207.

Eisner, I. See Schuloff, R.

Eistert, B. See Arnott, F.

Eitel, W., and Lange, B., dissolution of metals in fused salts. II., A., 411.

Eitel, W., and Skaliks, W., high-pressure syntheses of carbonates and silicates, A., 777.

double carbonates of alkalis and alkaline earths, A., 1250.

Ekefors, E., spectrum of aluminium in the extreme ultra-violet.

Ekeley, J. B., and Swisher, M. C., action of guanidine hydrogen carbonate on the sodium hydrogen sulphite additive products of benzylideneanilines, A., 1298.

Ekelund, S. C. G., gas producers, (P.), B., 506.

furnaces for extracting a metal from an ore, (P.), B., 522.

Ekenstam, A. af. See Schwalbe, C. G.

Ekhard, W., determination of the adhesive power of starch by Saare's method, B., 298.

determination of the starch value of frozen potatoes, B., 489.

Ekkert, L., reactions of colchicine, A., 86.

detection of lævulose in presence of other carbohydrates, A.,

reactions of morphine, A., 584. detection of holocaine, B., 452.

Eklund, J.A. See Enzlin, D.

Ekwall, P., and Mylius, W., acid sodium palmitates, A., 676.
Ekwall, P. See also Müller, Erich.
Elagin, N. V. See Iljinski, M. A.
Elakov, I. S., bleaching vegetable and mineral oils and animal fats with clay, B., 401.

Elam, C. F., banded structures in metal crystals, A., 17.

Elbe,  $G.\ von$ . See Wohl, K. Elden,  $C.\ A$ . See Sperry,  $W.\ M$ . Elder,  $A.\ L$ ., and Buswell,  $A.\ M$ ., changes in sulphur compounds during sewage treatment, B., 624.

Elder, A. L. See also Holmes, H. N.

Elder, F. R. See Bogert, M. T.

Elder, L. W., jun., and Wright, W. H., pH measurement with the glass electrode and vacuum tube potentiometer, A., 284.

Eldredge, E. E., and Kraft-Phenix Cheese Co., preservation of cheese, (P.), B., 147.

preservation of dairy products, (P.), B., 147.

Eldridge, H., and Eldridge, M. K., electric furnace, (P.), B., 526. Eldridge, H., McGhee, M. E., Waldron, M. E., and Eldridge, M. K., production of calcium carbide and pig iron, (P.), B.,

Eldridge, M.K. See Eldridge, H. Eldridge, W.A. See Walton, D.C.

Electric Furnace Co., Ltd. See Campbell, D. F., and Cope, F. T. Electric Storage Battery Co., [plates for] secondary or storage batteries, (P.), B., 178.

Electric Storage Battery Co. See also Breuning, E., and Heap, B. Electrical Research Products, Inc., and Stilwell, G. R., lightsensitive discharge device [photo-electric cells], (P.), B., 606.

Electro Bleach & By-Products, Ltd., and Hollins, J., electrodeposition of metals, (P.), B., 687.

Electro Bleach & By-Products, Ltd., Hollins, J., and Jepson, D., electrodeposition of metals, (P.), B., 605, 687.

Electro Co. See Moxham, A. J.

Electrofic Meters Co., Ltd. See Bost, G. W.

Electrolux, Ltd., and Lenning, A., absorption refrigerating systems, (P.), B., 269, 344.

absorption refrigerating apparatus, (P.), B., 461, 840.

Electrolux, Ltd., and Munters, C. G., absorption refrigerating systems, (P.), B., 344.
 Electrolux, Ltd., and Platen-Munters Refrigerating System

Aktiebolag, rectification by cooling of gases, gas mixtures, or vapours in absorption refrigerating apparatus, (P.), B., 193,

absorption refrigerating apparatus, (P.), B., 269, 762, 876. absorption refrigerating apparatus; rectification of gases, vapours, or mixtures thereof in absorption refrigerating

apparatus, (P.), B., 381.

absorption refrigerating systems, (P.), B., 461.

absorption refrigerating apparatus containing an inert gas, (P.), B., 1002.

Electrolytic Zinc Co. of Australasia, Ltd., manufacture of bearing metal, (P.), B., 822.

Electro Metallurgical Co., wrought articles of iron-chromium-nickel alloy, (P.), B., 686.

decarburising ferro-alloys, (P.), B., 821.

Electro Metallurgical Co., and Norwood, S. M., thermal decomposition of hydrocarbons, (P.), B., 882.

Electro Metallurgical Co. See also Beckett, F. M., Corson, M. G., Dawson, J. R., Feild, A. L., Mitchell, W. M., Norwood, S. M., and Williams, Roger.

Electropure Corporation. See Templeton, J. O.

Elektra-Lack-Werke G.m.b.H. System Kronstein, insulating material [resistant to heat, moisture, and electricity], (P.), B.,

Elektrische Gasreinigungs Ges.m.b.H., precipitation electrode for electrostatic gas-purifying apparatus, (P.), B., 252.

Elektrizitätswerk Lonza, electrothermic manufacture of aluminium-silicon alloys practically free from carbide, (P.), B., 134. [spray-]lacquering process [to form drops], (P.), B., 366.

manufacture of fertilisers containing nitrogen and phosphoric

acid, (P.), B., 694.

Elektrizitätswerk Lonza. See also Lüscher, E.

Elektrochemische Fabrik Kempen-Rhein, Brandenburg & Weyland G.m.b.H. See Arnot, R.

Elektro-Thermit Ges.m.b.H., and Crüm, A. G., welding of rails by means of superheated molten motal, (P.), B., 944.

Elema, B., Wolff's method for the determination of starch by means of the interferometer, B., 337. Elenbaas, W. See Peteri, (Frl.) M. G.

Elert, W., vibration and rotation spectra of a molecule of the type CH., A., 11.

Eley, C. V. A., furnaces, (P.), B., 2. Elger, F. See Bamberger, E. Elgersma, J. N., I. Nitro- and halogenonitro-benzenesulphonic

acids. II. Preparation and solubility in water of some salts of nitro- and halogenonitro-benzenesulphonic acids. III. Nitroand halogenonitro-benzenesulphonic acids, A., 1051.

Elgin, J. C., and Taylor, H. S., photosensitised and photochemical decomposition of hydrazine, A., 1022.

Elgin, J.C. See also Benton, A.F.

Elgort, M. S., viscosity and m. p. of the system ethylenediaminewater, A., 1374. Elhardt, W. See Braun, W.

Elias, H., and Weiss, S., action of acid on glycogen in the cell, A.,

Elias, N. M., alkali silicate product, (P.), B., 852.

Elings, S. B., and Terpstra, P., test of crystals for piezoelectricity, A., 18.

Elion, E., and Elion, L., determination of fermentative power of pressed yeasts from the point of view of bread-making, B., 792.

Elion, E. See also Schoen, M.

Elion, L. See Elion, E.

Elkin, H. A. See Butterworth, E. Ellburg, J. See Lundin, H.

Ellestad, R. B. See Baxter, G. P.

Ellett, A., polarisation of resonance radiation and the breadth of spectral lines, A., 365.

Ellett, A., and Olson, H. F., velocity of cadmium atoms regularly reflected from a rock salt crystal, A., 373.

Ellett, A., Olson, H. F., and Zahl, H. A., reflexion of atoms from crystals, A., 1125.

Ellett, W. B., and Hill, H. H., effect of lime materials on the outgo of sulphur from Hagerstown silt loam soil, B., 757.

Ellicott, C. R. See Bigge, H. C. Elling, H., treating with a liquid artificial threads, fibres, or

ribbons of cellulose, (P.), B., §49.

Ellinger, F., formation from histidine by ultra-violet irradiation of a substance which lowers blood-pressure and stimulates the intestine, A., 98. Ellington, O. C., storage properties of transparent celluloid, B.,

1010. Ellingworth, S., McLeod, J. M., and Gordon, J., bacterial oxidation

of compounds of the p-phenylenediamine series, A., 1341. Ellingworth, S. See also Browning,  $C.\ H.$ 

Elliott, A., isotope effect in the spectrum of chlorine, A., 115. absorption band spectrum of chlorine, A., 624.

Elliott, F. G. See Thomas, B.

Elliott, K. A. C., reduction of the disulphide group by enzyme systems, A., 98. Elliott, K. A. C. See also Dixon, M.

Ellis, C., resinous composition containing sulphur and its manufacture, (P.), B., 256.

resinous material and its manufacture, (P.), B., 566. sulphur product and its manufacture, (P.), B., 566.

composite resin ester, (P.), B., 826. Ellis, C., and Chadeloid Chemical Co., manufacture of coating compositions [chlorinated rubber varnishes], (P.), B., 294. cement [from chlorinated rubber], (P.), B., 294. chemical product [chlorinated rubber] and its manufacture, (P.),

B., 295.

Ellis, C., and Ellis-Foster Co., sulphur composition and its manufacture, (P.), B., 393.

oxidation of petroleum; cracking and oxidation of [hydrocarbon] oils, (P.), B., 424. oxidising petroleum oils, (P.), B., 425.

oxidation of kerosene, (P.), B., 425.

oxidation [of oil gas], (P.), B., 425. submerged-combustion process, (P.), B., 745. manufacture of diacetone alcohol, (P.), B., 916.

Ellis, C., Stewart, V. T., and Chadeloid Chemical Co., manufacture of calcium arsenate, (P.), B., 54.

Ellis, C. D., the structure of atomic nuclei, A., 622.

Ellis, D., bacteriological investigation into the state of pollution of the Clyde at Port Glasgow, Greenock, and Gourock, B., 380.

Ellis, G. H., and Celanese Corporation of America, treatment [dyeing] of cellulose acctate, (P.), B., 93\*.

dyeing, printing, or stencilling of cellulose acetate, (P.), B., 93\*. degumming [of natural silk], (P.), B., 470\*.

treatment of yarns and fabrics; treatment of cellulose derivatives, (P.), B.,640\*.

dycing or colouring products made with cellulose acetate, (P.), B., 717\*.

Ellis, G. H. See also Brit. Celanese, Ltd.

Ellis, J. H., and Shafer, W., nitrogen content of Red River Valley soils, B., 532.

Ellis, J. W., visible absorption bands of colourless liquids and their relation to infra-red bands, A., 239.

apparently anomalous Raman effect in water, A., 241. heats of linking of C-H and N-H linkings from vibration spectra, A., 243.

use of crystalline quartz for spectrographic work, A., 489. absorption spectrum of liquid benzene, A., 625.

near infra-red absorption spectra of some aldehydes, ketones, esters, and ethers, A., 864.

Ellis, O. C. de C., flame movement in gaseous explosive mixtures,

Ellis,  $O.\ C.\ de\ C.$ , and Wheeler,  $R.\ V.$ , explosions in closed cylinders. III. Movement of flame, A., 147.

Ellis, O. W., absorbability of gases in casting copper and effect of adding cuprosilicon, B., 99.

Ellis, W. C., Morgan, F. L., and Sager, G. F., thermal conductivity of copper, nickel, and some alloys of nickel, A., 991.

Ellis-Foster Co. See Dass, B., Ellis, C., Longovoy, B. N., and Weber, H. M.

Ellison, G., Hackler, H. W., and Buice, W. A., Bacterium coli in iced and uniced samples of water, B., 494.

Ellison, J. R., plant for the production of crystals, (P.), B., 580. Ellison, T. See Brit. Celanese, Ltd.

Ellman, P., correlation of calcium metabolism, parathyroid function, and chronic pulmonary tuberculosis. II., A., 1332.

Ellmer, A., coumarin and umbelliferone methyl ether in lavender products, B., 112.

Elisworth, H. V., thucholite, A., 674.

Ellsworth,  $H.\ V.$  See also Palache, C. Elmen,  $G.\ W.$ , and Bell Telephone Laboratories, Inc., production of magnetic dust cores, (P.), B., 215.

magnetic material; magnetic core, (P.), B., 606. magnetic material [iron-nickel-cobalt alloys], (P.), B., 686.

Elmen, G. W., and Western Electric Co., Inc., magnetic material [iron-nickel-cobalt alloys], (P.), B., 686.

Elmore, F. E., separation of materials by [vacuum] flotation, (P.), B., 381\*.

Elmqvist, R. See Ljunggren, G. Elmslie, W. P., and Steenbock, H., calcium and magnesium relationships in the animal, A., 954.

Elöd, E., production of cellulose esters, (P.), B., 202.

Elöd, E., and Acker, E., quaternary system Na<sub>2</sub>C<sub>2</sub>O<sub>4</sub>-H<sub>2</sub>SO<sub>4</sub>-Nu<sub>2</sub>SO<sub>4</sub>(or H<sub>2</sub>C<sub>2</sub>O<sub>4</sub>)-H<sub>2</sub>O at 25°, A., 32. Elöd, E., and Blüchel, W., improving plant materials used for

floral decoration, etc. [by coating with varnish, etc.], (P.), B.,

Elöd, E. See also Thomas, L.

Elsbach, E. B. See Waterman, H. I.

Elsdon, G. D., and Stubbs, J. R., refraction of milks low in solidsnot-fat, B., 620.

Elsen, G., actinium problem, A., 737.

Elsen, G. See also Böeseken, J. Elsey, H. McK. See Westinghouse Electric & Manuf. Co.

Elsner, H., determination of acetone groups in acetone [isopropylidene] sugars, A., 50.

Elsner, H. See also Schlubach, H. H. Elson, L. A., Gibson, C. S., and Johnson, J. D. A., 10-chlore-5:10dihydrophenarsazine and its derivatives. VIII. Bromination of 10-chloro-5:10-dihydrophenarsazine and its derivatives, A., 834.

Elstermann, O., and Baumhör, A., apparatus for fractional distillation of tar, crude oils, petroleum, and other liquids, (P.),

Elten, tin foil as a material for packing crustless cheese, B., 736. Elvegard, E., Staude, W., and Weigert, F., monochromatic light filters. II. Use of Goldberg's spectrodensograph, A., 479. Elvegard, E. See also Weigert, F. Elvehjem, C. A., and Hart, E. B. [with Howe, H. E.], copper

content of feeding-stuffs, A., 843.

Elvehjem, C. A., and Hart, E. B. [with Kemmerer, A. R.], relation of iron and copper to hamoglobin synthesis in the chick, A., 1476.

Elvehjem, C. A., and Lindow, C. W., determination of copper in biological material, A., 614.

Elvehjem, C. A., Steenbock, H., and Hart, E. B., distribution of copper in blood, A., 1096.

effect of diet on copper content of milk, A., 1099. Elvehjem, C. A. See also Lindow, C. W., and Waddell, J. Elze, F., essential oil of flowers of Polianthes tuberosa, L., B.,

constituents of East Indian lemon-grass oil, B., 957.

Ema, M. See Hamada, S.

Emanueli, L., and Da Fano, E., anomalies in the measurement of the viscosity of mineral oils containing suspended paraffin wax, B., 704.

Embden, G., Carstensen, M., and Schumacher, H., significance of adenylic acid for muscle function. IV. Fission and resynthesis of the ammonia-producing substance in muscle activity, A., 346.

Embden, G., and Jost, H., fission of lactacidogen in muscular contraction, A., 93.

Embden, G., Riebling, C., and Selter, G. E., significance of adenylic acid for muscle function. II. Deamination of adenylic acid by minced muscle and ammonia formation on muscle contraction, A., 346.

Embden, G., and Schmidt, Gerhard, adenylic acids of muscle and yeast, A., 591.

Embden, G., and Wassermeyer, H., significance of adenylic acid for muscle function. III. Ammonia formation in muscular work under various conditions. V. Source of the ammonia formed on contraction, A., 346.

Embirikos, N., effect of canal rays on alkali chlorides, A., 1357.

Emde, H., atomiser for flame coloration, A., 167.

diastereoisomerism. I. Configuration of ephedrine. II. Sterie rearrangement of ephedrine with hydrochloric acid. III. Chloro- and bromo-analogues of ephedrine. IV. Sterie rearrangement of ephedrine with sulphuric acid, A., 829. Emeléus, (Mrs.) F. M. See Emeléus, K. G.

Emeléus, H.J., phosphorescent flame of arsenic, A., 1215. light emission from phosphorescent flames of ether, acctaldehyde, propaldehyde, and hexane, A., 1218.

Emeleus, K. G., and Beck, J. W., single-crystal cathodes, A., 1354. Emeleus, K. G., and Brown, W. L., groups of electrons in the Geissler discharge, A., 368.

Emeléus, K. G., and Emeléus, (Mrs.) F. M., spectrum of the negative glow in oxygen, A., 1206.

Emerson, R., chlorophyll content and rate of photosynthesis, A., 728.

relation between maximum rate of photosynthesis and concentration of chlorophyll, A., 853.

photosynthesis as a function of light intensity and of temperature with different concentrations of chlorophyll, A., 853.

Emert, O. See Mittasch, A. Emery, F. E., metabolism of amino-acids by Paramacium caudatum, A., 1607.

Emery, R. L., and Neville Chemical Co., manufacture of coumarone-indene resins, (P.), B., 651.

Emich, F., optical striation, A., 24.

Emir, F., determination of the thickness of a film of olcic acid in the saturation state on water and of the saturation pressure of this film, A., 759. surface "varnishes" and surface solutions of myristic acid,

A., 876.

surface solutions and molecular varnishes; determination of the lengths of their molecules, A., 1002.

Emmer, H. See Lüttringhaus, A.

Emmerie, A. Seo Sjollema, B. Emmert, B., and Diehl, K., inner complex salts of 2-pyridyl methyl ketoxime, A., 1079.

Emmert, B., Diehl, K., and Gollwitzer, F., inner complex salts of pyrrole derivatives, A., 1083.

Emmert, B., and Meixner, F., poly-membered ring system, A., 1083.

Emmert, E. M., determination of nitrates and nitrogen [in organic material], A., 962.

chlorate method for determination of nitrate, nitrogen, total nitrogen, and other elements in soils and plant tissues, B.,

Emmett, A. M., changes in chemical composition of pears stored at different temperatures (with special reference to pectic changes), A., 854.

Emoto, V., three new species of sulphur-exidising bacteria, A., 724.

Empire Refineries, Inc. See Pettingill, H. S.

Empson Centrifugals, Ltd., and Noel, F. A. G., centrifugal purifying and dehydrating apparatus, (P.), B., 459.

Emschwiller, G., action of the zinc-copper couple on methylene

iodide, A., 907.

Emslander, F., artificial acidification of mashes and worts, B., 618.

fermentation and the surface of vessels, B., 953. electrometric titration [of worts], B., 994.

Emslie, A.G., determination of crystal potentials by diffraction of high-voltage electrons, A., 989.

Emulsion Process Corporation. See Halvorsen, A. L.

Emulsol Corporation. See Epstein, A. K. Enckell, J., causes of variations in the quality of mechanical wood pulp and paper pulp during manufacture, B., 847.

Ende, J. N. van den. See Keesom, W. H.

Ende, W., relation between the intensities of multiplets of mercury and of neon and the energy of the exciting electrons, A., 1119. contact potential between [pieces of] the same metal, A., 1146. Endell, K., new apparatus for measuring the thermal expansion

of refractory materials at 1600°, B., 246. Ender, F. See Schreiner, E. Ender, W. See Arndt, F.

Enderlen, E., Glatzel, H., and Pu, protein and energy economy in pancreatio diabetes of dogs, A., 344.

Enderli, M. See Bredig, G. Enderlin, E. See Moureu, C. Enderlin, L. See Moureu, C. See Moureu, C.

Endô, H., effect of cold-working on corrosion of iron and steel, B., 437.

corrosion of steel by acid solutions, B., 437.

Endô, H., and Nakawaga, K., corrosion of steel in dilute acids, B., 751.

Endo, M. See Tanaka, S.

Endo, Y. See Isobe, H.

Endrédy, A., silicates, A., 45.

Endres, G., and Herget, L., mineral constituents of blood-platelets and white blood-corpuscles, A., 588.

Endrezze, W. E., ore classifier, (P.), B., 686. Enenkel, A. See Dworzak, R. Engalhard, Inc., C. See Krueger, R. H.

Engel, E., adsorption with active charcoal, A., 998. chemical and physical properties of chemical warfare materials, B., 115.

Engel, E. W. See Smyth, C. P. Engel, H. See Bömer, A. Engel, K. H., cleavage of azo-dyes by sulphites, A., 1439.

Engelbrektson, O., drying apparatus for wood, (P.), B., 210. Engelhardt, A. See I. G. Farbenind. A.-G. Engelhardt, I. See Pfeiffer, P.

Engelhardt, W., excretion of bismuth from the human organism, A., 469.

Engelhardt, W. A., and Braunstein, A. E., relationship between phosphoric acid and glycolysis in blood, A., 88.

Engelhardt, W. A., and Ljubimova-Kremleva, M., hypobromite method for the determination of small quantities of ammonia,

particularly of residual nitrogen in blood, A., 339.

Engelhardt, W. A., and Parshin, A. N., relation between phosphoric acid and carbohydrate metabolism in isolated liver, A., 844.

Engelmann, H. See Werner, K., and Wintgen, R. Engelmannova, (Mlle.) D. See Dolejsěk, V.

Engels, O., application of nitrogenous fertilisers, B., 297.

does frost exert a "solubilising" effect on the phosphate and potash of soils? B., 407.

Engels, R., and Müller Röntgen-Rohrenfahr., C. H. F., fusing metallic bodies to glass, (P.), B., 858. Engemann, See Frick.

Enger, R., and Siedentopf, H., behaviour of a-ketovalerolactoney-carhoxylic acid in the animal body, A., 211.

England, H. N. See Taylor, J. K. Engle, E. W., Austin, M. M., and Fansteel Products Co., Inc.,

tantalum-alloy pen, (P.), B., 288.

Engle, E.W. See also Fansteel Products Co., Inc., and Miller, H.N. Engledow, F.L. See Doughty, L.R.

Englert, S. M. E., and McElvain, S. M., bromination of pyridine, Englis, D. T., and Day, W. N., composition of peculiar clinkers

found in snags after forest fires, A., 1418. Englis, D. T., and Gerber, L., diastase activity in plants: effect

of phosphates in the soil media, B., 905.

Englis, D. T., and Mills, V. C., determination of saponification value [of fats and oils]—a more stable alcoholic potash reagent, B., 650.

English, F., evaluation of tannin solutions by interferometry, B., 567.

English, S., viscosity of glass, B., 18.

solidification of amorphous matter [glass], B., 18. English, S., Green, (Mrs.) G. A., Hodkin, F. W., and Turner, W. E. S., effect of cullet on the melting and working properties

of potash-lead oxide-silica glasses, B., 472. English, S., and Turner, W. E. S., viscosity of some glasses of

abnormal working properties, B., 473.

English, S., Turner, W. E. S., and Winks, F., properties of glasses containing zinc oxide, B., 245.

Englund, B., action of multivalent alcohols and phenols on arsenic compounds, especially arsenoacetic acid, A., 52. reaction between polyhydric alcohols or phenols and arsenic

compounds, in particular arsinoacetic acid, A., 945.

Engwight, H. See Harrison, G. R. Enk, E. See Manchot, W.

Enlund, B. D., and Enlund, H., determining the content of foreign substances in iron and steel, (P.), B., 725. Enlund, H. See Enlund, B. D.

Enna, F. G. A., determination of fat in leather, B., 446. Ensign, W. B. See Reynolds, L. H. V.

Enskog, D., magnetism and nuclear structure, A., 232.

course of the a-change, A., 485. entropy of gases in irreversible processes, A., 754.

Enslow, L. H., progress in chlorination of water, 1927—1928, B., 152.

Entin, D., and Schmidt, A. A., biochemistry of mixed human saliva. I. Dextrose content, A., 91.

Enzlin, D., and Eklund, J. A., recovery of precious metals by amalgamation, (P.), B., 1019.

Epelbaum, S. See Palladin, A. Ephraim, F., constitution of the boron hydrides, A., 123.

Ephraim, F., and Rây, P., displacement of spectra of prascodymium compounds. V., A., 864.

displacement of spectra of neodymium compounds, A., 864. lanthanide contraction and spectrum displacement during formation of compounds; alterations of the samarium spectrum, A., 864.

Epner, C., production of lubricating oil from gases containing hydrocarbons, (P.), B., 634.

production of liquid polymerisation products [fuels] from gases production of inquia polymerisation products [fuels] from gases containing hydrocarbons, (P.), B., 707, 844.

production of [silent] electric discharges at elevated temperatures, (P.), B., 824.

Eppenbach, W., homogenising mill, (P.), B., 497, 876\*.

Eppenberger, W. See Treadwell, W. D.

Eppensteiner, W. F. See United States Metals Refining Co.

Epstein, A. K., egg product and its production, (P.), B., 301.

manufacture of margarine, (P.), B., 482.
Epstein, A. K., and Emulsol Corporation, production of egg products, (P.), B., 995\*.

Epstein, A. K., and Reynolds, M. C., emulsified [food] products and their manufacture, (P.), B., 659.

Epstein, C. See Fodor, A.

Epstein, E., and Lieb, H., splonic substance in Gaucher's disease, A., 344.

Epstein, E. Z., influence of hypnotics and other drugs on thyroxine diurcsis, A., 1104.

diuresis after oral and intravenous administration of liquid and changes produced by hypnotics, A., 1104.

Epstein, G. I. See Scherlin, S. M. Epstein, M. H. See Walker, H.

Epstein, P. S., and Muskat, M., continuous spectrum of the hydrogen atom, A., 859.

Epstein, S., and Rawdon, H. S., steel for case-hardening; normal and abnormal steel, B., 57.

Erbacher, E. See Kieferle, F.

Erbacher, O., and Philipp, K., separation and preparation of radium-D, radium-E, and polonium (radium-F), A., 371.

Erbe, F. See Lorenz, R.

Erbe, L. See Lorenz, R. Erben, F. X., chloroiodoquinine, A., 1319.

Erben, P. K., manufacture of fruit wine, (P.), B., 574.

Ercoli, A. See Gallotti, M.

Erdman, L. W. See Humfeld, H.

Erdmann, K., and Oesterr.-Amerikan. Magnesit Akt.-Ges., manufacture of moulded articles from fibrous materials, (P.), B., 817. Erdmann, K. See also Oesterr.-Amerikan. Magnesit A.-G.

Erdős, J. Sce Rusznýák, S. Erfan, H. Sce Bey, A.

Erickson, E. T., determination of small quantities of selenium in ores, B., 899.

Ericson, A. See Edlén, B.

Ericson, R., and United States Gypsum Co., manufacture of lightweight ceramic material, (P.), B., 284.

Erikson, H. A., effect of water vapour on the mobility of gaseous ions in air, A., 114.

nature of the ions in air, A., 483, 1211.

Eriksson, S. See Westgren, A. Erin, V. V., manufacture of manganese borate, B., 938.

Erk, S., determination of Engler viscosities, A., 167.

influence of surface tension on viscosity measurements, A., 500. Erlenmeyer, H., creeping of crystals. II., A., 503.

Ernecke, A. Sco Auwers, K. von. Ernst, A. F. See La Mont Corporation.

Ernst, E., crystal class of pentaerythritol, A., 751.

Ernst, E. C. See Burrows, M. T. Ernst, F. A. See Reed, F. C.

Errera, J., molecular association. I. Connexion between the vapour pressures of binary liquid mixtures and the polarity of the molecules forming them, A., 130.
molecular association. II. Relation between the viscosity of

binary liquid mixtures and the polarity of the constituent molecules, A., 130, 387.

electric moment of colloidal particles of vanadic anhydride, A., 135.

Errera, J., and Henri, V., absorption spectra and molecular structure of the dihalogen derivatives of benzene, A., 377.

Erste Böhmische Kunstseidefabrik Akt.-Ges., manufacture of

hollow artificial threads, (P.), B., 514.

Ertschikovski, G. O., field y-electroscope and its application to the investigation of radioactive minerals, A., 902.

Ervin, D. M., "acetone body" formation and the chemical

affinity of oxygen for carbohydrate and fatty acid, A., 94.

Erwin, T. C., photographic screens, (P.), B., 961.

Erzröstung Ges.m.b.H., and Balz, G., mechanical [ore-roasting] kilns, (P.), B., 522. Escaich, A., and Worms, J. P., dycing process [for animal fibres].

(P.), B., 640\*.

Esch, W., the accelerator [of vulcanisation] "Tuads" and its

substitutes, B., 28. Eschbach, W., and Friederich, W., ignition pellets for electric blasting fuses, (P.), B:, 152.

Escher, H. H., determination of higher unsaturated fatty acids. A., 293, 294.

conversion of higher fatty acids into barium salts, A., 294.

Eschmann, M. S. See Ginzberg, A. S.

Escourrou, R., catalytic hydrogenation under reduced pressure. II. Selective reduction in a vacuum of citral, geraniol, and limonene, A., 173.

action of ozone on cyclogeraniolenes, A., 190.

catalytic hydrogenation under reduced pressure. III. Reduction of nitriles in a vacuum, A., 1298

action of ultra-violet rays in bleaching cellulose, B., 168. factors affecting the sizing of paper pulp, B., 202.

Esmarch, W., and Siemens & Halske Akt.-Ges., manufacture of ozone, (P.), B., 331\*.

high-frequency induction furnace, (P.), B., 783\*

Esnault-Pelterie, R., treatment of iron and steel, (P.), B., 686. Espe, IV., emission of electrons from metals on irradiation with X-rays, A., 1122.

Esseff Chem. Ind. & Handels-Akt.-Ges. See Proschko, F.

Esselmann, P. See I. G. Farbenind. A.-G. Essential Oil Sub-Committee of the Standing Committee on uniformity of analytical methods, report on physical constants, B., 622

Esser, H. See Gries, H., and Zimmermann, L.

Essex Specialty Co., Inc. See Gehrig, W. F.

Essin, O., polymerisation distance between discharged ions in the preparation of persulphates, A., 36.

electrolytic formation of sodium arsenate, A., 774. electrolysis with diaphragm; (formulæ of Foerster and of Guye), A., 1021.

Esslemont, M. S. See Neale, A. V.

Estermann, J., electrical dipole moments of organic molecules. II., A., 244.

electrical dipole moment of pentaerythritol by the method of molecular rays, A., 490.

Estreicher, T. von, determination of hardness in water by means of soap solution, B., 1034. Établissements E. Belin, development and fixing of photographs,

(P.), B., 961. Établissements Gaiffe-Gallot et Pilon, electronic discharge bulbs,

(P.), B., 481. Etchells, H., Popplewell, A., and Cameron & Son, Ltd., L., [man-

ganese-chromium steel] alloys, (P.), B., 479. Etheridge, A. T., determination of aluminium in steel, B., 326.

Ethyl Gasoline Corporation. See Bereslavsky, E. V. Etorma, S. B. See Lava, V. G. Etrillard, P. See Diénert, F.

Ets, H. N., chemical changes in muscle produced by drugs, A., 350. Ettel, V., derivatives of volemitol, A., 798.

Ettinger, J. See Linda, S. Ettisch, G., "natural" P.D. at the boundary, cell-electrolyte, A.,

Ettisch, G., and Einstein, O., physical chemistry of cerebrospinal fluid and serum diagnosis; Lange's gold sol reaction, A., 343.

Ettisch, G., and Ewig, W., technique of electrodialysis, A., 110. Ettisch, G., Ewig, W., and Sachsse, H., mutual induencing of the solubilities of proteins, A., 394.

Ettisch, G. See also Freundlich, H.

Etzelmiller, R. E. See Hamilton, C. S.

Eucken, A., theory of charge alternation of colloidal particles, A., 27. detection of the transformation of antisymmetrical to symmetrical hydrogen molecules, A., 497.

Eucken, A. [with Lüde, K. von, and Hoffmann, G.], specific heat of gases at medium and high pressures. I. Specific heats of air, nitrogen, carbon monoxide, carbon dioxide, nitrous oxide, and methane between 0° and 220°. II. Specific heat of chlorine between -30° and 180°, A., 1372.

Eucken, A., and Hiller, K., detection of a transformation of orthointo para-hydrogen by determinations of specific heat, A., 990\*. Eucken, A., and Meyer, L., additivity of molecular dipole moments;

constitution of Ca, compounds, A., 980. molecular forces. II. Temperature variation of the second virial coefficient of some organic vapours, A., 1372.

Eugène, F., anomalies of annealing cold-worked copper and brass, B., 285.

"Eukama" Eis- & Kühlmaschinen Ges.m.b.H., preventing foaming and entrainment of liquid in steam generators, (P.), B.,

Eule, M., and Hartmann, A., artificial ice, (P.), B., 579.

Euler, B. von, Euler, H. von, and Hellström, H., relation between antimony trichloride reactions of vitamin-A and of certain carotinoids, A., 103.

vitamin-A action of lipochromes, A., 358.

Euler, B. von, Euler, H. von, and Karrer, P., biochemistry of carotin-like substances, A., 610.

epiphyses and liver extracts from rats after feeding with

carotinoids, A., 1112. Euler, H. von, and Brunius, E., rate of oxidation of quinol by oxygen, A., 148.

reaction between sugars and amino-acids, A., 175.

Euler, H. von, Brunius, E., and Proffe, S., formation of lactic acid from glycogen with dried muscle and activators, A., 216.

Euler, H. von, and Gard, S., purification of eo-zymase from muscle, A., 100.

Euler, H. von, and Hellström, H., compounds of antimony trichloride and stannic chloride with unsaturated hydrocarbons, A., 307.

formation of xanthophyll, carotin, and chlorophyll in barley germinated in light and in darkness, A., 1204.

changes in the amount of carotinoids in hen's eggs during incubation, A., 1334.

Euler, H. von, Hellström, H., and Runehjelm, D., [biochemical factors in] heredity, A., 848.

Euler, H. von, Hellström, H., and Rydbom, M., determination of small amounts of carotinoids, A., 1474.

Euler, H. von, and Jansson, B., catalytic decomposition of hydro-

gen peroxide by metallic compounds, A., 1401. Euler, H. von, and Johansson, H., reduction of methylene-blue in mixtures of lævulosc and amino-acids, A., 34.

Euler, H. von, Karrer, P., and Rydbom, M., relationship between vitamin-A and carotinoids, A., 1343.

Euler, H. von, and Myrback, K., problems of fermentation, A., 606.

co-zymase, A., 849.

co-zymase and vitamin-B, A., 1340.

XVI. Further isolation experiments, A., 1340\*. eo-zymase. Euler, H. von, Myrbäck, K., and Brunius, E., enzymic inactivation of co-zymase, A., 957.

Euler, H. von, Myrbäck, K., and Myrbäck, S., specificity of enzymic fission of dipeptides, A., 1339.

Euler, H. von, and Nilsson, H., top yeast, A., 607.

quantitative enzyme studies with respect to Mendelian factors, A., 848.

Euler, H. von, Nilsson, H., and Runehjelm, D., catalytic action of some compounds containing iron, A., 773.

Euler, H. von, and Olander, A., catalytic acceleration of the oxidation-reduction reaction between formic acid and methyleneblue, A., 35.

Euler, H. von, Rengman, G., and Brunius, E., reaction between sugars and amino-acids. V., A., 1280.

Euler, H. von, and Runehjelm, D., [biochemical factors in] heredity. III., A., 1497.

Euler, H. von, and Rydbom, M., vitamin-A, polyenes, and ergosteryl phosphate, A., 1496.

Euler, H. von, Rydbom, M., and Hellström, H., antimony trichloride reaction of fish oils, A., 851.

Euler, H. von, Steffenburg, S., and Hellström, H., [biochemical factors in] heredity. II., A., 1197.

Euler, H. von, Wolf, A., and Hellström, H., steryl phosphates, A.,

Euler, H. von. See also Bartel, C., Baudisch, O., Euler, B. von, and Myrbäck, K.

Euler, U. von, antagonism between adrenaline and ergotamine, A., 474.

Euromerican Cellulose Products Corporation, and Dorner, B., treatment of cellulosic material, (P.), B., 91. production of cellulosic material, (P.), B., 593.

Evans, A.J., utilisation of waste iron pickle, (P.), B., 17.

Evans, B. S., analytical applications of sodium hyposulphite, A., 1030.

rapid method for dissolving high-chromium steels for determination of sulphur, B., 476

separation and determination of arsenic [in metals], B., 1046.

Evans, B. S. See also Clarke, S. G.

Evans, C. C., and Evans, E. J., magneto-optical dispersion of some organic liquids in the ultra-violet region of the spectrum, A., 1365.

Evans, E.J.See Evans, C. C., Stephens, E., and Williams, T. C. Evans, E. V. See South Metropolitan Gas Co.

Evans, F. C., apparatus for treating refuse, (P.), B., 798.

Evans, H. M., and Lepkovsky, S., sparing action of fat on the antineuritic vitamin, A., 852.

sparing action of fat on vitamin- $B_1$ , A., 1203.

Evans, J., and Jones, A. O., determination of small amounts of alcohol in the human subject, A., 601.

Evans, M. M., Slater, L., and Wheeler, R. V., vitrain, B., 155. Evans, M. W. See Conant, J. B.

Evans, O. B., and Copley, I. C., water-gas generator, (P.), B., 587. Evans, O. M. See Furman, N. H.

Evans, P. H., and Bowden, R. C., acid-concentrating towers, (P.), B., 964.

Evans, U. R., oxide films responsible for the tints on heated copper, A., 134.

passivity of metals. II. Breakdown of the protective film and the origin of corrosion currents, A., 270. mechanism of corrosion, A., 271.

electrochemical corrosion of painted or lacquered steel, B., 437. Evans, U. R., and Bannister, L. C., growth of silver iodide films, A., 1232.

Evans, W., mixing solids with liquids, (P.), B., 664. purification and softening of water, (P.), B., 836.

Evans, W. P., drying cylinders of drying machine, (P.), B., 307. Everest, A. E., and Wallwork, J. A., application of azoic colours to

wool, B., 774.

Everett, J. G., trypanocidal activity and chemical constitution. I. New sulphur derivatives of aromatic organic arsenicals, A.,

Everett, M. R., determination of blood-sugar. I. Benedict's alkaline copper solution, A., 837.

Everett, M. R., and Sheppard, F., total sugar of blood and urine. II. Hydrolysable sugar of blood, A., 89.

Everitt, C. K., and Allen & Co., Ltd., E., alloy steels [for permanent magnets], (P.), B., 524.

Evers, N., antimony trichloride colour test for vitamin-A, A., 1203. Evershed, J., emission lines on the absorption bands of H and K, A., 859.

Evershed & Vignoles, Ltd. See Perry, C. E.

Evien, H. M., and Zwicky, F., internal pressure of strong electrolytes, A., 883. Evlampiev, V., V., ketals of hydroxyketones, A., 1277.

Evrard, V., system water-hexamethylenetetramine, A., 1012. Evslind, B. B. See Gavrilov, N. J.

Evtushenko, I. B., manufacture of copper sulphate from brass

turnings, B., 127. catalytic dissolution of copper in sulphuric acid, A., 1246.

Ewald, K. F. A. See Moldenhauer, W.

Ewald, L. See Ziegler, K. Ewald, P. P., modern developments of wave mechanics and their bearing on the understanding of crystal structure, A., 973. Ewald, P. P. See also Ehrenberg, W. Ewald, W., turbidimeter, A., 167.

Ewan, T., and Imperial Chemical Industries, Ltd., catalyst for the production of hydrocyanic acid, (P.), B., 321. production of carbon, (P.), B., 704. Ewan, T., Roberts, H. M., and Imperial Chemical Industries, Ltd.,

effecting gaseous dehydrating reactions, (P.), B., 887. Ewe, G. E., determination of alkaloids in admixture with vegetable drugs, B., 417.

Ewig, W. See Ettisch, G.

Ewing, D. T., Hardesty, J. O., and Kao, T. H., behaviour of

solutions of chromium sesquioxide on electrolysis, (P.), B., 649. Ewing, F. J., and Pauling, L., crystal structure of potassium

chloroplatinate, A., 747 Ewing, J. See Pearsall, W. H.

Ewing, S. P. See Logan, K. H.

Ewles, J., relation between luminosity and concentration in luminescent solid solutions, A., 240.

Excelsior Feuerlöschgeräte Aktien-Gesellschaft, and Wagener, C., [ejector] means for producing foam, more particularly for fireextinguishing purposes, (P.), B., 762. xcelsior Feuerlöschgeräte Aktien-Gesellschaft.

Excelsior Feuerlöschgeräte

Schnabel, R. Exell, H. C. See Holliday, G. C.

Exler, T., chemical and pharmacological examination of the leaves of Atropa belladonna, L., and of the extract prepared from them, B., 35.

Extey, W. H., apparatus for elevating acids and other [corrosive] liquids, (P.), B., 897.

Exton, W. G., scopometer, A., 1262.

Exton, W. G., Rose, A. R., and Wells, P. V., determination of sugar in urine, A., 1192.

Eyber, G., photochemical decomposition of iron pentacarbonyl,

A., 1248.

Eyer, H. See Freudenberg, K.

Eykman, C., basal metabolism of inhabitants of the tropics, A.,

Eymann, C. See Roth, W. A.

Eymers, (Miss) J. G. See Gell, W. C. van, and Kapuscinski, W. Eyring, H., straggling of a-particles from polonium in passing through gases, A., 485.

Eyster, W. H., protochlorophyll, A., 960.

Faber, A., rapid determination of water in brown coals for

briquette manufacture, B., 421.

Faber, H. See Jander, G.

Fabian, F. W., cause of fermented honey and its control, B., 415.

Fabian, F. W., and Quinet, R. I., cause of the fermentation of honey, B., 415.

Fabian, H., influence of nutrients on the value of bast-fibre plants

(flax and nottle). I., B., 371. Fabre, J. H., and Brémond, E., use of alkali sulphites in wine manufacture, B., 618.

Fabre, R., and Picon, M., toxicology of bismuth. II. Distribution in the organism after injection of aqueous solutions of bismuth compounds, A., 469.

Fabre, R., and Simonnet, H., irradiation of sterols; relation between irradiated sterols and antirachitic vitamin, A., 222.

hæmolysis. III. Photochemical transformation of lecithin in the presence of hæmatoporphyrin, A., 340.

comparative value of biological and physical determinations of

the [antirachitic activity of] irradiated ergosterol, A., 359. activity of irradiated ergosterol, A., 610.

physical and biological study of the dextro-rotatory sterol from yeast [zymosterol], A., 809, 1340\*.

Fabre, R. See also Binet, L.

Fabriek van Chemische Producten, manufacture of cellulose esters, (P.), B., 126.

Fabrique de Produits Chimiques Organique de Laire, and Mignonac, G., manufacture of primary amines, (P.), B., 11.

Fabry, R. J. C., perchloric acid as an agent for the clean destruc-

tion of organic matter, A., 898. Fachini, S., and Dorta, G., chemical composition of the oil in rela-

tion to the morphological and physiological characters of the plant, A., 105.

Färberei Weidmann Akt.-Ges., apparatus relating to bleaching, washing, or dyeing of woven fabrics, (P.), B., 641.
Fagan, J. T. See Brit. Thomson-Houston Co., Ltd.
Fagan, T. W., and Watkin, J. E., composition of mangolds grown

in Mid-Wales, B., 616.

Fager, E. P., and Reynolds, A. H., absorption of oxygen by alkaline tannates, B., 431.

Faguet, M. See Richet, C.

Fahrenwald, F. A., alloy, (P.), B., 439.

Fahrig, C., carbohydrate exchange in tumours and normal tissue and its relation to the lactic acid economy of the body, A., 465. Fahrni, J., product containing wood fibre and asbestos, (P.), B.,

Fahsel, C. D., red lead paint, (P.), B., 255.

Failey, C. F., and Wagenen, G. van, effect of age on the rate of dying of skeletal muscles, A., 1332.

Faillebin, M. See Bey, L. Faini, G. See Crippa, G. B.

Fair, G. M. See Whipple, M. C.

Fairbourne, A., partial esterification of polyhydric alcohols. VIII. Proposed standards in work on configuration of glycerol derivatives, A., 1038.

partial esterification of polyhydric alcohols. IX. True  $\beta$ -ether of glycerol, A., 1422

Fairbourne, A., and Cowdrey, G. W., partial esterification of polyhydric alcohols. VII. Unreliability of proofs of the structure of disubstituted glycerols, A., 292. Fairbrother, J. A. V., viscosity changes produced in egg-albumin

by X-rays, A., 98. Fairchild, C. O., Hoover, W. H., and Peters, M. F., m. p. of palla-

dium, A., 754.

Fairweather, D. A. W., Beckett, E. G., Thomas, J., and Scottish Dyes, Ltd., production of calcium or other alkaline-earth benzoates and benzoic acid, (P.), B., 427.

Fairweather, D. A. W., Beckett, E. G., Thomas, J., and Selden Co., production of benzoic acid and like processes, (P.), B., 845\*.

Fairweather, D. A. W., Thomas, J., and Scottish Dyes, Ltd., production of sulphuric acid esters of aminoanthrahydroquinones [leuco-aminoanthraquinones], (P.), B., 673.

dyeing [with sulphuric esters of leuco-2-aminoanthraquinone],

(P.), B., 678.

Fajans, K., refractometric researches. VII. Deformation of ions and molecules and refractometric data, A., 13.

[properties of salt-like compounds and atomic structure], A.,

Fajans, K., and Karagunis, G., effect of adsorbed ions on the light absorption of heavy metal halides, A., 625. influence of adsorbed ions on the absorption spectrum of metal

halides, A., 1377.

Falck, W. H. See Goldsmith, M. M.

Fales, A. L., treatment of industrial wastes from paper mills, [wool scouring,] and tannery on Neponset River, B., 380.

Fales, H. A., and Roller, P. S., reduction of permanganate ion by chromic ion in acid solution, A., 516.

Falk, E. A. See McClellan, W. S

Falk Stadelmann & Co., Ltd., and Neue Glühlampen Ges.m.b.H., [forming] filaments for electric incandescence lamps, (P.), B., 217, 362.

[spiral tungsten] filaments for electric incandescence optical projection lamps, (P.), B., 331.

Falkenberg, H., [lead-]tungsten [bearing-metal] alloy, (P.), B.,

Falkenhagen, H., and Dole, M., inner friction of electrolytic solutions and its interpretation according to the Debye theory, A., 1389.

Falkenhagen, H., and Williams, J. W., frequency dependence of the electrical conductance of solutions of strong electrolytes, A., 1014.

Falkenhagen, H. See also Debye, P. Falkenhausen, F. (Frh.) von. See Kalb, L. Falkiner, R. S., [cleansing] treatment of sugar cane, (P.), B., 696. Falkner, A. G., incandescence gas burners, (P.), B., 162.
Fall, F. P. See Drury, C. D.
Fallek, N., production of storage-battery separator elements, (P.),

B., 177.

Fallot, J. See Smallwood, A. Fallot, M., magnetisation coefficient and structure of solutions of gelatin, A., 763.

Fallot, P. Sec Jérémine, (Mme.) E. Faltis, F., and Kloiber, F., 4:5-dimethoxyhemimellitic acid, A., 699.

derivatives of hemipinic acid, A., 1448.

Faltis, F., and Zwerina, K. [with Attia, A. B. G.], constitution of isochondodendrine. III., A., 698.
Faludi, F., relation of bile secretion to the velocity of ultrafiltra-

tion of blood, A., 592.

effect of cholagogues on the swelling of colloids, A., 600.

Fanselow, H. See Strack, E.

Fanselow, J. R., influence of electrolytes and non-electrolytes on optical activity and relative resistance to shear of gelatin systems, A., 1379. Fansteel Products Co., Inc., [uni-directional] electrolytic condenser,

(P.), B., 946.

Fansteel Products Co., Inc., and Engle, E. W., electrolytes for electrolytic rectifiers, etc., (P.), B., 528\*.

Fansteel Products Co., Inc. See also Balke, C. W., Engle, E. W.,

and Miller, H. N.

Fanti, P., and Silbermann, H., reaction between triazoles and thiocarbimides, A., 198.

Faragher, W. F., Morrell, J. C., and Comay, S., interaction of alkyl sulphides and mercury salts, A., 1269.

Faragher,  $\hat{W}$ . F. See also Morrell,  $\hat{J}$ .  $\hat{U}$ .

Farasey, J., drying apparatus, (P.), B., 927. Farber, C. W. See Breyer, F. G.

Farbsalz-Ges.m.b.H., determination of the purity of potassium and sodium ferrocyanides by titration with zino sulphate solution, B., 555.

Farine, A. See Rivier, H.

Farinholt, L. H. See Dunning, F.

Farkas, A., formation of gaseous gold hydride, A., 1387.

Farkas, L., Goldfinger, P., and Haber, F., ignition of electrolytic gas, A., 1148.

Farma Cream Products Co., Ltd. See Stewart, A. V.

Farmer, Ernest Harold, and Scott, W. D., properties of conjugated compounds. VI. Dibromination products of cyclic butadienes, A., 304.

Farmer, Ernest Harold, and Warren, F. L., properties of conjugated compounds. VII. Additive formation of cyclohexenes, A., 812. Farmer, Ernest Howard, production of coloured pictures from photographic prints, (P.), B., 74\*.

Farnham, R. V., treatment of discrete materials with gaseous media, particularly applicable to drying, (P.), B., 496.

Farnsworth, H. E., diffraction of electrons by a copper crystal, A., 861.

electron emission and diffraction by a copper crystal, A., 1212. Farr, C. C., and Rogers, M. N., helium in New Zealand, A., 787. Farr, H. V. See Collins, W. D., and Mallinekrodt, E., jun.

Farrar, M. G., and Carbide & Carbon Chemical Corporation, compressed gas, (P.), B., 928.

Farrel-Birmingham Co., Inc. See Hilton, A. F.

Farrell, J. L. See Johnston, L. M. Farrow, F. D. See Cunliffe, P. W.

Fast, G., gas scrubber, (P.), B., 547.
Fasting, J. S., apparatus for treating wet raw materials in the manufacture of cement, (P.), B., 981\*.

Fasting, J. S., and Smidth & Co., F. L., rotary [cement] kiln, (P.), B., 475\*.

Fatkin, E. S., and Westinghouse Electric & Manufacturing Co.,

rotary-hearth furnace, (P.), B., 1035.
Fattah, M. T., and Cruess, W. V., factors affecting the composition

of dates, B., 187. Faugne, L. H., manufacture of concentrated acetic acid from

calcium acetate, (P.), B., 11. Faurskov, V. A. T., production of emulsions from fatty materials,

(P.), B., 218.
Fauser, G. See "Montecatini," Soo. Gen. per. l'Ind. Mineraria ed

Agricola.

Fanst. See Bazzoni, C. B. Faust, C., alteration in colloid structure of native cellulose by dissolution and spinning, B., 125.

recovery by dialysis of sodium hydroxide from waste liquors containing colloidal impurities, B., 679.

rate of decomposition of viscose solutions, B., 1042

Faust, O., and Karrer, P., enzymic degradation of cellulose and cotton, B., 468.

Fauth, P. L., extraction or filtration of oil-containing material, and removal of solvent from the residues, (P.), B., 63.

Favorskaia, T. A. See Grebenschtschikov, I. V.

Favre, C., [production of] crêpe effects on delaines, B., 751.
Favrel, G., formation of mixed azo-derivatives corresponding with alkylacetylacetones, A., 1172.

determination of chlorine and oyanogen in chloral cyanohydrin, B., 956.

Favresse, M. E. P., and Peres, J. C., waterproofing of textiles,

paper, etc., (P.), B., 241.

Fawcett, E. H., and Acree, S. F., dilution in colorimetric hydrogenion measurements. I. Isohydric indicator methods for accurate determination of  $p_{\rm H}$  in very dilute solutions, A., 1255.

Fawcett, H. W., settling tanks particularly adapted for treatment of wool-washing liquors, (P.), B., 894. washing or cleaning of wool, (P.), B., 1010.

Fawcett, R. C., Perkin, W. H., jun., and Robinson, R., strychnine and brucine. VII. Constitution of the alkaloids discussed in relation to the hypothesis that dinitrostrychol is an isoquinoline derivative, A., 82.

Fawkes, C. E., apparatus for centrifugal separation, (P.), B.,

Fear, C. M., Sanio's potassium dichromate test for tannins, B., 405.

alkaloid test for tannins, B., 615.

Feather, N., and Nimmo, R. R., distribution of range of the a-particles from radium-C' and thorium-C', A., 621.

Feather, N. See also Nimmo, R. R.

Fedele, R., variations of the Hall coefficient, of the thermoelectric power, and of the resistance with the magnetic field in ordinary and compressed bismuth, A., 1369. Federal Phosphorus Co. See Booth, C. F., Carothers, J. N., and

Noble, A.

Federmann, H., removal of nicotine from tobacco, (P.), B., 149, 738\*.

Federov, M. V. See Butkewitsch, W. S., and Rodionov, V. M. Fedorov, B. P., meso-derivatives of anthracene and dianthryl, B., 934.

Fedorov, B. P. See also Minaev, V. I.

Fedorova, O. S., determination of perchlorate, A., 1255. Fedorova, O. S. See also Pamfilov, A. V.

Fee, A. R., renal excretion of chlorides and water, A., 91.

Fee,  $A. R. \cdot See$  also Bayliss, L. E.

Feher, D., periodio determinations of soil respiration and the bacterial activity of forest soils, A., 611. nitrogen metabolism of forest soil, A., 728.

Feher, D., and Bokor, R., biological activity of sandy forest soil of the Hungarian lowlands, A., 1113. Feher, F. See Simon, A.

Fehlmann, M. See Ferrero, P.

Fehn, H., Jander, G., and Pfundt, O., rapid volumetric determination of the sulphate content of drinking water by visual conductometric titration, B., 342.

Fehrenbach, K. See Stollé, R. Feibelmann, R., and Meves, W., hyposulphito meter, B., 1013. Feige, R., apparatus for distillation of coal and other solid fuels, (P.), B., 7.

Feigl, F., detection of phosphoric acid with ammonium molybdate and benzidine, A., 900.

Feigl, F. [with Hirsch, G., and Tamchyna, I.], qualitative microanalysis. III. [Detection of thiocyanate, fluoride, and copper, two methods of distinguishing between tap water and distilled water, detection of alkali in water, and a drop reaction for ammonia], A., 284.

Feigl, F., and Bondi, A., reactivity of iodine in organic solutions. II., A., 1398.

Feigl, F., and Krumholz, P., analytical application of complexchemical and induced reactions, A., 783. qualitative microanalysis of acids, A., 1255.

Feigl, F. See also Leitmeier, H.

Feild, A. L., and Electro Metallurgical Co., manufacture of vanadium steel, (P.), B., 214.

Feild, A. L., and Linde Air Products Co., preheating the charge in shaft furnaces, (P.), B., 213.

Feinschmidt, O., and Ferdmann, D., action of adrenalino on the creatine-phosphoric acid content of muscles, A., 474. Feinschmidt, O. See also Ferdmann, D.

Feist, K., determination of cresol in liquor cresoli saponatus, B., 301.

Feitknecht, W., oxidation of copper at high temperatures, A., 517. Feld & Vorstman Ges.m.b.H., suction filter, (P.), B., 3.

Feldman, E. D., removal of scale or incrustations from boilers or preventing the formation of same, (P.), B., 578.

compositions for destroying insect and fungoid pests in vine-yards, hop plantations, orchards, gardens, and fields, (P.), B., 832.

Feldmann, L. See Fischer, H. O. L.

Feldmühle Papier & Zellstoffwerke Akt.-Ges., apparatus for manufacture of films from cellulose solution, (P.), B., 280.

manufacture of films from aqueous cellulose solutions, particularly viscose, (P.), B., 639.

apparatus for drying cellulose films, (P.), B., 750.
[roller] apparatus for treating with liquids artificial films prepared from viscose, (P.), B., 750.

Feldt, A. See Chem, Fabr, auf Aktien (vorm. E. Schering). Felix, B. B. C. See Böeseken, J.

Felix, F. See Soc. of Chem. Ind. in Basle. Felix, K., and Dirr, K., clupein. 1., A., 1322.

Felix, K., and Lang, A., fractionation of partial protein hydrolysates, A., 948.

action of pepsin-hydrochloric acid after trypsin-kinase, A., 1338.

Felix, K., Müller, H., and Dirr, K., arginine metabolism. A., 94.

Felix, K., Scheel, F., and Schuler, W., uricolysis. I., A., 217.

Fell, H. B., and Robison, R., growth, development, and phosphatase activity of embryonic avian femora and limb-buds cultivated in vitro, A., 1197.

Fellenberg, T. von, determination of ethereal oils in gentian spirits, B., 453.

colorimetric determination of higher alcohols in spirits, B.,

Fellers, C. R., extraction of apple juices in the manufacture of

jelly, B., 415.

Fellowes, F. See Dunlop Rubber Co., Ltd.

Fellows, C. H., dissociation of water in steel tubes at high temperatures and pressures, B., 999.

Fellows, H., influence of oxygen and carbon dioxide on the growth of Ophiobolus graminis, A., 107.

infection of the wheat plant by Ophiobolus graminis, A., 613. Fellows, H. C. See Coleman, D. A.

Fels, E., sexual hormone in blood, A., 358.

Felten & Guilleaume Carlswerk Akt.-Ges., treatment of substances used for impregnation of cables, (P.), B., 607. incorporation of colloidal substances in rubber, (P.), B., 612.

impregnating high-tension electric cables, (P.), B., 901.

Felton, T. M., deformation study of cobalt oxide-alumina-silica mixtures, B., 940.

Fender, H. W., and Prodorite, Ltd., acid-proof and other tanks,

pipes, linings, walls, etc., (P.), B., 308. Fendius, C., and Biltz, W., systematic doctrine of affinity. XLVIII. Heats of formation of uranium tetrachloride, trichloride, and trioxide, A., 31.

Feng, O. T., and Read, B. E., assays of Chinese ephedrine, A., 97.

Feng, C. T. Sec also Read, B. E.

Fenger, F., Andrew, R. H., and Ralston, A. W., isoelectric precipitation of pepsin. II., A., 100.

Fenner, C. N., analytical determination of uranium, thorium,

and lead, as a basis for age-calculations, A., 44. radioactive minerals from Divino de Ubá, Brazil, A., 46. crystallisation of basalts, A., 1162.

Fenner, C. N., and Piggot, C. S., mass-spectrum of lead from bröggerite, A., 620. Fenninger, C. W. See Ives, F. E.

Fenoglio,  $H_{\cdot,\cdot}$  petrographic studies on the zone of Canavese; granite of Belmonte, A., 1418.

Fenske, M. R. See Frolich, P. K. Fenton, G. W., and Ingold, C. K., influence of poles and polar linkings on the course pursued by elimination reactions. III. Decomposition of dialkylsulphones, A., 171.

attempt to prepare  $\psi$ -isoindole, A., 195. influence of poles and polar linkings on the course pursued by elimination reactions. IV. Olefinio degradation of sulphones, A., 1423.

influence of polos and polar linkings on the course pursued by elimination reactions. V. Thermal decomposition of quaternary phosphonium hydroxides, A., 1431.

Fenyvessy, B. von, and Reiner, L., respiration and glycolysis of trypanosomes. II., A., 218.

Féodorov, V., coke-oven heat balances, B., 840.

Ferber, E., existence of dihydro- and octahydro-p-indole, A., 308. Ferber, J., and Rabinovitsch, S., increase in blood-sugar following ingestion of glycerol, A., 1484.

Ferbers, wet gas purification, B., 5. Ferchmin, A., and Frisch, S., duplicity of the D-terms of sodium

and potassium, A., 618. Ferdmann, D., and Feinschmidt, O., effect of "training" of muscle on its content of phosphorus compounds, A., 1193. Ferdmann, D. See also Feinschmidt, O.

Ferencz, A., and Cseresznyes, G., Staphylea oil, B., 482.

Ferguson, A., drop-weight method for the measurement of surface tension, A., 758.

Ferguson, A., and Hakes, J. A., capillary-tube method for the simultaneous determination of surface tension and density,

Ferguson, A. L., chemistry of body processes; nature of the action between gelatin and electrolytes, A., 764.

Ferguson, C. See Myers, H. B. Ferguson, C. S. See Kienle, R. H.

Ferguson, J. B., and Funnell, W. S., determination of vapour and liquid compositions in binary systems. I. Methyl alcoholwater, A., 255.

Ferguson, J. K. W., and Irving, L., determination of earbon dioxide content of muscle, A., 1479.

Ferguson, J. L., process and apparatus for puffing cereals, (P.), B., 834.

Ferguson, J. M., some constituents of basic open-hearth slag, B., 21.

Ferguson, L. See Schumacher, E. E. Fermor, L. L., relationship between the sp. gr. and ash contents of the coals of Korea and Bokaro: coals as colloid systems, B., 155.

Fernandes, L., theory of Raman effect, A., 626.

sulpho-salts. VIII. Persulpho-salts, A., 663.
Fernandes, L. [with Orlandi, C.], sulpho-salts. VII. Polysulphovanadates, A., 525.

Fernández, O., catalytic power of medicinal mineral waters, A., 518.

Fernández, O., and De Mirasierra, G., condensation of pinonic acid with aldehydes, A., 1297.

Fernández, O., and Moscardo, A., comparative study of methods of determination of citral in lemon oil; constants of the Spanish oil, B., 576.

Fernandez-Ladreda, J. M., physical properties of 72/28 and 90/10 brasses as functions of the final working and the pre-

ceding heat-treatment, B., 57. Fernau, A., and Spiegel-Adolf, M., physico-chemical investigations of irradiated proteins. V. Changes in serum-albumin produced by radium rays and their relation to coagulation by heat

and light, A., 409. Fernau, A. See also Spiegel-Adolf, M.

Fernbach, A., Yuill, J. L., and Rowntree & Co., Ltd., production of citric acid, (P.), B., 70\*

Ferrajolo, M. See Mazza, F. P.

Ferrand, F., manufacture of [subdivided] artificial fibres, (P.),

Ferrari, A., and Carugati, M., crystal form in the formation of solid solutions. IV. Analysis of the anhydrous systems MgCl<sub>2</sub>-FeCl<sub>2</sub> and CdCl<sub>2</sub>-FeCl<sub>2</sub>, A., 500.

Ferrari, A., Celeri, A., and Giorgi, F., crystalline form in the formation of solid solutions. V. Thermal and X-ray analyses of the systems CoCl<sub>2</sub>-FeCl<sub>2</sub> and MnCl<sub>2</sub>-FeCl<sub>2</sub>, A., 996.

Ferrari, A., and Giorgi, F., crystalline structure of bromides of bivalent metals, A., 1369.

Ferrari, A., and Inganni, A., crystal form in the formation of solid solutions. III. Thermal analysis of the systems MnCl<sub>2</sub>-CoCl<sub>2</sub>, CdCl<sub>2</sub>-CoCl<sub>2</sub>, and MgCl<sub>2</sub>-CoCl<sub>2</sub>, A., 388. Ferrari, C. G., and Bailey, C. H., carotinoid pigments of flour,

B., 657.

determination of carotin in flour, B., 1029. Ferraris, A., piston pumps for corrosive liquids, (P.), B., 308. Ferrein, K. See Bümming, G.

Ferrero, P., and Bollinger, G., 1-chloronaphthalene. III. Sulphonation, A., 56.

Ferrero, P., and Conzetti, A., alkaline fusion of anthracenemonosulphonie acids, A., 59. Ferrero, P., and Fehlmann, M., 1-chloronaphthalene; chlorin-

ation of naphthalene in solution, A., 1054.

Ferrey, G. J. W., determination of nitrates in bismuth carbonate, B., 850.

Ferrier, G. S. See Cumming, W. M.

Ferrier, W. K. See Tartar, H. V. Ferris, S. W., Cowles, H. C., jun., and Henderson, L. M., com-

position of paraffin wax, B., 1004.

Ferris, S. W. See also Henderson, L. M.

Ferry, N. S., and Parke, Davis & Co., immunising product and its production, (P.), B., 661\*.

Ferry, R. M., and Green, A. A., hæmoglobin. III. Equilibrium between oxygen and hæmoglobin in relation to changing  $p_{\rm R}$ , A., 338

Fersman, A., morphology and geochemistry of Tiuja-Mujun, A.,

Féry, A., variations in the resistivity of thin layers of platinum as functions of thickness and temperature, A., 20.

Fesefeldt, H., spectrographic detection of beryllium, A., 530. Fessler, A. H., and McCaughey, W. J., cyanite as found in Western North Carolina, B., 209.

Fester, G., and Salgado, J., essential oils of the huahuan (Laurelia serrata), B., 996.

Fetterolf, L. D., and Parmelee, C. W., effect of soda, barium, and zinc on the elasticity and thermal expansion coefficients of glass, B., 433.

Fettich, G., determination of blood-cholesterol, A., 1326. Fetzer, W. R., electrolysis of sodium sulphide solutions, A., 154. Feuerstein, K. See Pauly, H.

Feulgen, R., Imhäuser, K., and Behrens, M., plasmalogen. I. Properties of plasmalogen and preparation and nature of plasmal, A., 341.

Few, F., effect of organic impurities on the mechanical properties of Portland cement, B., 898.

Ficai, C., utilisation of burnt pyrites as an iron ore, B., 21. Ficai, C., and Piacentini, P., desulphurisation of burnt pyrites, B., 977.

Fichmann, J. See Huttig, G. F.

Fighter, F., peroxide theory of Kolbe's electrosynthesis, A., 1247.

electrolysis of salts of organic acids, A., 1403.

Fichter, F., and Brunner, E., oxidations with fluorine. XI.

Action of fluorine on solutions of the salts of thallium,

manganese, copper, and lead, A., 282.

oxidations with fluorine. XII. Action of fluorine on nitric acid, perchloric acid, and related compounds, A., 526.

oxidations with fluorine. XIII. Action of fluorine on alkaline acetato solutions, A., 779.

Fichter, F., and Herszbein, S., electrochemical oxidation of

α-methylnaphthalene, A., 56.

Fichter, F., and Lapin, H., oxidation of salts of monobasic fatty acids with potassium percarbonate and potassium persulphate, A., 1247.

Fichter, F., and Lindenmaier, W., electrolysis of ammonium acetate and ammonium hexoate, A., 775.

Fichter, F., and Stein, I., electrochemical reduction of benzoic acid, A., 925.

Fichter, F., and Stern, S., now salts of the tervalent iodine cation, A., 41.

Fici, O. See Mazza, F. P.

Fick, R. See I. G. Farbenind. A.-G.

Fickentscher, H., and Mark, H., viscosity of hydrophilic colloids,

Fiddes, W. J., apparatus for screening or washing coal, coke, ballast, ores, grain, etc., (P.), B., 4.

Fidlar, J. B., propellant powder charge, (P.), B., 662.

Fiedler, K., influence of sugar inversion on gel formation, B., 415. Fiehe, J., determination of hydroxymethylfurfuraldehyde in honey, B., 146.

Fiehe, J., and Kordatzki, W., determination of hydroxymethylfurfuraldehyde in honey and artificial honey, B., 375, 955.

See Morgan, A. F.

Field, B. E., acid-resistant alloys, B., 779. Field, C. See Brillo Manufacturing Co., Inc. Field, J. See Martin, E. G.

Fieldner, A. C., constitution and classification of coal, B., 155. classification of North American coals, B., 965.

Fiero, G. W., effect of clay on rancid fats, B., 564.

Fierz, H. E., Schlittler, E., and Waldmann, H., aniline-o-sulphonic acid (orthanilic acid), A., 1055.

Fierz-David, H. E., use of iodino and iron as a chlorine carrier, A., 273.

analysis of dyestuffs, B., 551.

Fierz-David, H. E., and Jaccard, G., constitution of a new hydroxybenzfluorenone, A., 70.

Fieschi, A., [physiological] action of pancreatic secretin, A.,

Fieser, L. F., derivatives of 3:4-phenanthraquinone, A., 567. 1:2-phenanthraquinone, A., 930.

phenanthraquinones related to alizarin and purpurin, A., 930. sulphonation of phenanthrene. I. New monosulphonate. II. Disulphonation, A., 1171.

reduction potentials of various phenanthrenequinones, A., 1452.

Fieser, L. F., and Dietz, E. M., syntheses of polynuclear anthraacenes, A., 1055.

1:2-benzo-3:4-anthraquinone [2:3-benzophenanthraquinone], A., 1452.

Filěáková, H. See Dolejšek, V.

Filipovich, I. V., and Vuisotzki, V. A., distribution and properties of resinous substances in various parts of the trunk of pine trees (Pinus sylvestris) according to seasons, B., 218.

Filippo, J. D., determination of sucrose and of starch syrup, B.,

Filippov, A., ultra-violet fluorescence of iodine bromide, A., 9. anomalous dispersion of lithium vapour, A., 1129.

Filippov, A., and Gross, E., fine structure of the principal series of casium and rubidium, A., 365.

[fine structure of the high series doublets of cæsium], A., 860. Filippov, A., and Prokoflev, V., anomalous dispersion of sodium

vapour, A., 1129. Filippyčev, F. G. Sce Pamfilov, A. V. Fillipeo, V. M. See Iljinski, V. P.

Filma Oil Burners, Ltd., and Marsden, A., method and apparatus

for burning liquid fuel, (P.), B., 771.

Filtration Engineers, Inc., and Young, F. W., deposition of [tapering] cakes of solid matter from fluids in which the solids are suspended, (P.), B., 79.
Filtration Engineers, Inc. See also Henry, V. S.
Filtrators, Ltd., and Saks, V., [automatic devices for use in] the

treatment of water, (P.), B., 76. Filtres Philippe, filter presses, (P.), B., 1036.

Filtrol Co. of California. See Baylis, W. S.

Finch, G. I., and Hodge, D. L., gaseous combustion in electric discharges. III. Cathodic combustion of dry carbon monoxide detonating gas, A., 890.

gaseous combustion in electric discharges. IV. Effect of moisture on the cathodic combustion of carbon monoxide detonating gas, A., 1401.

Finch, G. I., and Stimson, J. C., electrical condition of hot surfaces during the adsorption of gases. III. Platinum surface at temperatures up to \$50°, A., 875.

Fincke,  $\hat{H}$ ., caeao beans and cocoa products. VI., B., 300. "values" of fat from preserved-milk products and its mixtures with cacao butter, B., 607.

Findlay, J. H., spectra excited by active nitrogen, A., 375. Fink, C. G., and DeCroly, C. M., corrosion rate of ferro-nickel alloys, B., 898. Fink, G. J. See Holmes, J. A.

Fink, H., isoelectric point of coproporphyrin and its physiological significance, A., 879.

production of coproporphyrin by yeast, A., 1340. Fink, H., and Weber, K., coproporphyrin synthesis by dried

yeast, A., 100.

Fink, W. L. See Archer, R. S.

Finkelnburg, W., molecular spectrum of hydrogen with wavelength determinations of 3667 lines between λ4861 and 3314 Å.,

Finkelnburg, W., and Mecke, R., band systems in the molecular spectrum of hydrogen. I. Singlet system. II. Triplet system, Ā., 732.

Finkelstein, W. See also Mecke, R. Finkelstein, H. See I. G. Farbenind. A.-G. Finkelstein, W., and Maschovetz, W., kinetics of the combustion of carbon monoxide, A., 272, 515.

Finlay, J. W., and Pierce Petroleum Corporation, lubricating composition and its manufacture, (P.), B., 386.

Finn, A. N., making the glass disc for a 70-inch telescope reflector, B., 776.

Finnemore, H., and Cox, C. B., cyanogenetic glucosides in Australian plants, A., 1113.

Finzi, C., thiophenols; formation of rings containing sulphur, A., 74.

Fioletova, A., active silica; soluble silica in clays, B., 598.

Fircks, P. B. See Hölzl, F.

Firestone Tyre & Rubber Co. (1922), Ltd., and Gross, R. R., disintegration and devulcanisation of rubber scrap, (P.), B., 925. Firth, E. G. See Monham, C. A.

Firth-Sterling Steel Co. See Comstock, G. J.

Fisch, J., simple method of providing a burette with an automatic zero adjustment, A., 1415.

Fisch, J. See also Mayr, C. Fischbach, E. See Hahn, A.

Fischbeck, K., heat of decomposition and of activation of some oxides and sulphides, A., 1389.

Fischbeck, K., and Dorner, O., specific resistance of cupric sulphide and its temperature coefficient, A., 989.

preparation of pure cupric sulphide, A., 1250. Fischer, A., removal of tar fog from gases, B., 270. Fischer, A. See also Burkhardt, O.

Fischer, Alois, method of uniting radioactive material with a metallic carrier, (P.), B., 687\*.

Fischer, C., jun., Reddish, W. T., and Kontol Co., process for treating emulsions, (P.), B., 745.

treatment of [petroleum-water] emulsions; reclamation of oil, (P.), B., 884.

Fischer, C., jun., Reddish, W. T., and Twitchell Process Co., manufacture of pure mineral oil sulphonates, (P.), B., 548.

Fischer, Erich. See Eichwede, H., Grasselli Dyestuff Corp., and Wagner, Hermann.

Fischer, E. W., and Virgin, E. W. J., production of amalgams to be used in dentistry, (P.), B., 480.

Fischer, F., purification of gases from organically combined sulphur, (P.), B., 233.

purifying gases from sulphuretted hydrogen by decomposing the latter into hydrogen and sulphur, (P.), B., 313.

Fischer, F., and Bangert, F., formation of a manganese carbide decomposable by water from manganese oxide and methane at relatively low temperatures, B., 717.

Fischer, F., Bangert, F., and Pichler, H., formation of liquid hydrocarbons from acetylene. I. Polymerisation of acetylene,

B., 703.

Fischer, F., and Lieske, R., behaviour of lignins in the natural

disintegration of plants, A., 478.

Fischer, F., and Peters, K., effect of the electric discharge on gases containing hydrocarbons at reduced pressure, A., 659. transformation of methane or coke-oven gas by electric discharges under reduced pressure, B., 703.

Fischer, F., Peters, K., and Koch, H., formation of liquid hydrocarbons from acetylene. II. Catalytic hydrogenation and

condensation of acetylene, B., 966.

Fischer, F., Peters, K., and Ted-Nedden, W., separation of the constituents of coke-oven gas by washing under pressure, B., 1002.

Fischer, F., and Pranschke, A., formation of products rich in sulphur by the action of sulphur dioxide on carbon, B., 42.

Fischer, F. G., and Löwenberg, K., synthesis of phytol, A., 1421. Fischer, G. See Bronn, J. I., and Concordia Berghau-A.-G. Fischer, H., production of formic acid, acetic acid, and hydro-

fluoric acid, (P.), B., 16.

Fischer, Hans (Münschen), hæmin synthesis, A., 1083\*.

Fischer, Hans, and Bäumler, R., synthesis of octaethylporphin, A., 332.

chlorophyll. VII. Phao- and phylloerthro-porphyrins, A., 1185.

Fischer, Hans, Baumann, E., and Riedl, H. J., halogenated pyrroles. VII. Halogenated methenes of cryptopyrrole and their constitution, A., 1463.

Fischer, Hans, and Helberger, H., synthesis of chlorin, A., 941 Fischer, Hans, and Hummel, G., natural porphyrins. XXIII. Bromoporphyrin I and its conversion into deuteroporphyrin, A., 580.

Fischer, Hans, Hummel, G., and Treibs, A., acetates of porphyrin and hæmin: constitution of rhodoporphyrin, A., 940. natural porphyrins. XXIV. Hæmatoporphyrin, A., 1466.

Fischer, Hans, and Kirrmann, A., synthesis of mesoporphyrins, A., 1316.

porphyrin syntheses. XXIV. Syntheses of mesoporphyrins I, IV, XIII, and XIV, A., 1466.

Fischer, Hans, Platz, K., and Morgenroth, K., porphyrin syntheses.

XXIII. Syntheses of coproporphyrins III and IV, A., 940.

Fischer, Hans, and Schormüller,  $\hat{A}$ ., porphyrin syntheses. XXIV. Syntheses of three pyrroporphyrins, a rhodoporphyrin, a pyrroætioporphyrin, and a deuteroporphyrin, A., 1184.

Fischer, Hans, Weichmann, H. K., and Zeile, K., porphyrin syntheses. XXV. Chlorophyll. VIII. Syntheses of porphinmonopropionic acids VI, III, and I; conversion of pyrroporphyrin into porphinmonopropionic acid III, A., 1465.

Fischer, Hans, and Zeile, K., synthesis of hæmatoporphyrin, protoporphyrin, and hæmin, A., 333.

Fischer, Hans (Zurich), rôle of calcium in narcosis and stimulation of decorticated and completely decorebrated animals, A., 96. Fischer, Hellmut, influence of the composition and temperature

of the electrolyte in the preparation of beryllium by the Stock-Goldschmidt and Siemens & Halske methods, B., 723.

production of electrolytic deposits of beryllium from molten electrolytes, B., 723

analytical chemistry of beryllium, A., 1031.

detection of heavy metals by means of "dithizone" (diphenylthiocarbazone), A., 1412.

Fischer, Hellmut. See also Illig, K.

Fischer, H. H., cooling curves of gelatinising systems, A., 137.

Fischer, H. J. von. See Zocher, H. Fischer, H. O. L., and Feldmann, L. [with Dangschat, G.], derivatives of glycollaldehyde and methylglyoxal, A., 680.

Fischer, J. See Ruff, O.

Fischer, Joseph, and Jaenckner, W., sulphur tetrafluoride, A.,

Fischer, K., and Holsboer, M., heat-treatment of metals, (P.), B., 213.

Fischer, K. (Leipzig). See Kröger, M.

Fischer, M. F., effect of repeated stresses on the magnetic properties of steel, B., 131.

Fischer, Martin H., and Hooker, M. O., caseinates and the theory of lyophilic colloids, A., 507.

Fischer, Ph., electrical conductivity of compressed salt mixtures, A., 32.

rate of dissolution of alloys in hydrochloric acid, A., 1019. uric acid and its determination in blood and urine, A., 464.

determination of protein and residual nitrogen in blood and urine, A., 837.

Fischer, Ph., and Horkheimer, P., clarification and decolorisation of urine, A., 342. Fischer, R. See Dietzel, R.

Fischer, Robert, detection of cantharidin [in urine, etc.], A., 614. influence of hydrogen-ion concentration on hamolysis by solanine, A., 1097.

Fischer, Robert. See also Koffer, L.

Fischer, V., thermodynamics of mixtures, A., 509.
Fischer, Walter. See Houben, J.
Fischer, Werner, and Biltz, W., systematic doctrine of affinity.
XLIX. Relationships of chlorine and other halogens with gold, A., 31.

Fischer, Werner. See also Biltz, W. Fischer, W. M., and Schmidt, A., separation and determination of nitrous acid by esterification, A., 667.

Fischler, F., chemistry and therapeutic action of dextrose, A., 720.

decomposition of sugars by alkalis, A., 1043. Fischler, F., Täufel, K., and Souci, S. W., behaviour of dextrose when heated in alkaline solution, A., 912.

Fischmann, C. See Bourdillon, R. B. Fischnich, A. See Sauerwald, F.

Fish, G. L., and Salisbury, R., emulsifying apparatus, (P.), B., 308.

Fishback, C. F. See Cox, G. J. Fishberg, E. H., relation of proteins and lipins of blood serum

to osmotic pressure, A., 338.

Fishel, E. C. See Dokkenwadel, F. G.

Fishenden, M., and Dufton, A. F., heat transmission [from buildings], B., 324.

Fisher, B. C., and Raiziss, G. W., derivative of mono- and diaminohydroxyphenylarsinic acids, A., 457.

Fisher, E. A., flour quality: its nature and control, B., 535. Fisher, E. A., and Halton, P., relation of hydrogen-ion concentration and buffer value to the baking quality of flour. I. and II., B., 262, 491.

Fisher, E. A., and Jones, C. R., manufacture of flour, (P.), B., 71, 909\*.

Fisher, E. A. See also Halton, P.

Fisher, E. S., and Utah Metals Flux Co., improvement of ferrous metals and products thereof, (P.), B., 561.

Fisher, H. C., and Richardson Co., metal-plating non-metallic substances, (P.), B., 440.

de-inking of paper, (P.), B., 470. Fisher, H. J. See Bailey, E. M.

Fisher, H. L., and Goodrich Co., B. F., azo-dyes from rubber derivatives, (P.), B., 974.

Fisher, H. L. See also Goodrich Co., B. F.

Fisher, (Miss) N. I. See Riley, H. L.

Fisher, R. A., effect of sodium silicate in increasing the yield of barley, B., 185.

Fisher, R. A. See also Eden, T.

Fisher, V., thermodynamics of solutions, A., 755. Fisher, W. F., Kallauner and Seger methods of rational analysis [of clays], B., 129.

Fiske, C. H., and Subbarow, Y., phosphocreatine, A., 590.

Fitch, W. H., recuperators for furnaces, (P.), B., 495.

Fitelson,  $J_{\cdot,\cdot}$  comparison of the Monier-Williams and the A.O.A.C. methods for the determination of sulphurous acid in food products, B., 338. Fitterer, G. R. See Herty, C. H., jun.

FitzGerald, F. A. J., and Harper Electric Furnace Corporation, electric furnace, (P.), B., 605.

Fitzsimmons, E. S. See Flannery Bolt Co.

Flaig, F. F. W., [flat] glass bulbs for hydrometers and like instruments, (P.), B., 193.

Flammer, E., and Kleber, C., manufacture of soap [flakes], (P.), B., 650\*, 690\*.

Flannery Bolt Co., Landgraf, F. K., and Fitzsimmons, E. S., manufacture of metal pots for heat-treating and carburising metal objects, etc., (P.), B., 329.

Flanzy, M. See Semichon, L.

Flaschenträger, B., preparation of Grignard's reagent for the micro-determination of hydroxyl groups by Tschugaev and Zerevitinov's method, A., 1286.

micro-determination of glycerol in fats by Zeisel and Fanto's

method, B., 986.
Flaschner, E. See Schindler, W.
Fleischer, G. See Szendrö, P.
Fleischer, R., hydrogen ions as the reason for the occurrence of photo-electric spectral selectivity of potassium, A., 736.

Fleischhans, Z. See Heller, K. Fleischmann, P., quantitative micro-detection of morphine. I. Determination of morphine in pure solution. II. Determination of morphine in serum and in whole blood, A., 846.

Fleischmann,  $\hat{R}$ . See Abderhalden, E.

Fleischmann Co. See Brown, E. B., Bührig, W. H. F., Dawson,  $B.\ M.$ , Hasling, J., jun., Klein, E., Nilsson, M., and Weber,  $F.\ C.$ Fleischner, E. See Quilico, A. Fleissner, H., benzene safety lamp for indicating fire-damp, (P.), B., 635\*.

Fleissner, H., and Duftschmid, F., gaseous reduction of iron ores, B., 818.

Fleissner, H. See also Apold, A. Fleming, C. F. See Prowse, F. J.

Fleming, W. E., effects of carbon disulphide treatment of soil for the Japanese beetle on the abundance of micro-organisms and on the ammonia and nitrate content, B., 487.

Flemming, W., Klein, H., and Silesia Verein Chemischer Fabriken Ida- & Marienhuette, separation of mono- and di-alkyl deriv-

atives of aromatic amines, (P.), B., 123\*.

Flentje, M. E., unusual methods of water purification, B., 455. Flesch, H., application of highly sulphonated oils in the textile

Flesch, H., application of highly sulphonated oils in the textile industry, (P.), B., 242.

Flesch, M., employment of highly sulphonated Turkey-red oils in tanning, (P.), B., 296.

Fletcher, P. B. See Selman, R. F. W.

Fleuron, Inc. See Kobbé, W. H.

Fleury, P., determination of iron in blood, A., 1095.

Fleury, P., and Ambert, P., determination of organic acids in gastric juice by Hehner's method, A., 591.

Fleury, P., and Malmy, M., determination of chloral in syrup of chloral, B., 188.

Fleury, P., and Marque, J., molybdomanganimetry of iron salts, its mechanism and limitations, A., 784.

reducing power of polyols towards alkaline solutions of potassium iodomercurate, A., 948.

determination of iron in blood, A., 1095.

action of potassium mercuri iodide in alkaline medium on polyhydric alcohols and related substances; analytical applications, A., 1266.
determination of reducing sugars with potassium mercuric

iodide, A., 1426.

Fleury, P. See also Grimbert, L.

Flexner, L. B. See Barron, E. S. G. Flick, F. B. See Gilman, H.

Flight, W. S. See Aktiebolaget Separator.

Flinn, F. B., and Inouye, J. M., copper in the organism, A., 1486. Flint, E. E., crystallographic investigation of some rare-earth nitrates, A., 125.

Flint, H. T., first- and second-order equations of the quantum theory, A., 739.

Flintkote Co. See Johnston, R. T., and Kirschbraun, L.

Flippen, J. P., gas sorubber, (P.), B., 1001.
Flodin, H. G., Gustafsson, E. G. T., and Cornelius, H. G. E., production of iron and iron alloys having a very low percentage of carbon; production of dense iron and iron alloys directly from order or (P.) P. 214 directly from oxide ores, (P.), B., 214.

Flodin, N., and Cornelius, G., apparatus for continuously producing and drying briquettes, (P.), B., 344.

Flörsheim, W. See Schlubach, H. H. Flössner, O., and Kutscher, F., analysis of the liver of Raja

clavata, A., 463. metabolism in athletes, A., 466. Florentin, J. M. F. D., and Kling, A. J., production of light hydrocarbons from carbonaceous materials and similar bodies containing complex organic compounds, (P.), B., 968.

Florentin, J. M. F. D., Kling, A. J., and Matignon, C., production of light hydrocarbons, (P.), B., 348.

Floriani, L., glucosides containing hydrogen cyanide, A., 1113. Flowers, A. E., and De Laval Separator Co., apparatus for con-

tinuously treating liquids, (P.), B., 664.
Fluch, P., determination of free metallic lead in litharge and red

lead, B., 104.
Flügge, R. Sco Kangro, W.
Flürscheim, B., effect of the spatial position of substituent groups on acidic strength, A., 29.

theories of aromatic substitution, A., 1289.

Flürscheim, B., and Holmes, E. L., pentanitroaniline, A., 57.

hexa-aminobenzene, A., 438. Flume, E. See Rheinholdt, H. Flurer, J. See Vavon, G.

Flury, F., standardisation of vitamin-D in butter and margarine containing vitamin, B., 109.

Flury, F., and Deutsche Ges. für Schädlingsbekampfung m.b.H., vermin-killer, (P.), B., 540\*.

Fock, V., velocity in Dirac's theory of electrons, A., 863, geometrical treatment of Dirac's theory of the electron, A.,

1209.

Fock, V., and Ivanenko, D., possible geometrical explanation of the relativistic quantum theory, A., 739.

Focke, A. E. See Blake, F. C.
Fodor, A., and Epstein, C., degradation of gelatin with acetic anhydride; isolation of acetylated associates of partly dehydrated polypoptides. IV. Degradation of proteins and their derivatives, A., 1188.

structure and enzymic degradation of the acetylated polypeptide associates obtained from gelatin by degradation

with acctic anhydride, A., 1490.

Fodor, A., and Mayer, Kurt, spectrophotometric and cataphoretic experiments on the adsorptive power of gelatin for methyleneblue hydrochloride, A., 28.

Foex, G., crystallisation of mesomorphic substances in the magnetic field; obtaining a solid with oriented molecules, A., 22. diamagnetism of the azoxyanisole crystal and Larmor's precession, A., 628.

different magnetic states of an ion, A., 862.

Foëx, G. See also Weiss, P.

Föge, H., heat exchangers, (P.), B., 305.

Földes, E., effect of sulphur on carbohydrate metabolism, A., 215.

Földi, Z., poly-acid amines and diamines containing sulphur, A. 1047.

Fölsch, M., Hungarian essential oils, B., 536, 797.

Fölsner, A., detection of small amounts of vanadium, A., 532.

Foerster, F. [with Haufe, E., and Kircheisen, E.], sulphurous acid and its salts. VI. Autodecomposition of aqueous hydrogen sulphite solutions. VII. Interaction of hydrogen sulphite and hydrosulphide. VIII. Inter-relationships of the sulphur acids, A., 159.

Foerster, F., and Klemm, K., structure of electro-deposited metals,

Fogel, L., Rubinsztein, T., and Tauman, A., cadmium, manganous, and cobaltous chloroacetates, A., 1040.

Fogg, H. C. See James, C. Foglieni, L. S., vitamins, A., 358.

Fohlen, J., industrial process for obtaining liquid hydrocarbons by simultaneous cracking and hydrogenation ["Semo" process], B., 667.

Fokin, A. S. See Rabinovitsch, M. Folcini, A. J., Spacu's sensitive reaction for copper and thiocyanate; reagent for polysulphides, A., 1031.

action of complex halides and cyanides on certain aromatic diamines, A., 1031.

Foley, C. B., and Foley Inc., C. B., electric furnace, (P.), B., 177.

Foley, Inc.,  $C.\ B.$  See Foley,  $C.\ B.$ 

Folin, O., ferricyanide method for determination of blood-sugar, A., 462.

blood sugar, A., 462.

copper method of determining blood-sugar, A., 714.

Folin, O., and Malmros, H., Folin's micro-method for determination of blood-sugar; blood-sugar and fermentable blood-sugar determined by different methods, A., 1096.

Folin, O., and Marenzi, A. D., determination of tyrosine and tryptophan in 0-1 g. of protein; colorimetric determination of cystine in protein; preparation of uric acid reagent free from phenol reagent, A., 1093. Folliss, C. See Duniop Rubber Co., Ltd.

Folmer, H., ionising effect of a-rays in solid dielectrics, A., 1124. Folzenlogen, R. G. See Richardson, A. S.

Fonda, G. R., burn-out of incandescence lamps; phenomena

influencing the life of gas-filled lamps, B., 726.

Fonder, J. F., influence of soil type on the calcium and magnesium content and other physiological characters of the lucerne

plant, B., 408.

relationship of soil type to the calcium and magnesium content of green bean stems and leaves and of their expressed juices, B., 694.

variations in the calcium and magnesium contents of pea plants on different soil types, B., 906.

Fonderia Milanese di Acciaio, manufacture of steel in electric furnaces, (P.), B., 479. Fonio, G. See Antoniani, C.

Fonrobert, E., and Greth, A., pyroabietic acid from French rosin, B., 403.

Fontaine, A., A.F.N. system of lixiviation, B., 579.

Fontes, G., and Thivolle, L., variations of the results of sugar determinations in relation to dilution of the blood after the mercurial proteinisation of blood, A., 89.

fermentation residue [of the blood]; determination of blood-

sugar, A., 588.

validity of determinations of "immediately reducing blood-sugars." I. Determination of blood-sugars. II. Total amount of fermentable sugar of the blood. III. Absence of influence of disulphides and thiol compounds on sugar determinations by the phosphomolybdic acid and potassium permanganate method, A., 588.

hypoglycæmio action of allylisopropylbarbituric acid and

adrenaline antagonism, A., 1196. zes-Diacon, and Laforce, "ehromiform" as a preservative Fonzes-Diacon, and Laforce, for milk samples, B., 109.

Foote, H. W., and Dixon, J. K., vapour pressures in the systems ethyl phthalate with ethyl alcohol and with methyl alcohol,

Foote, H. W., and Vance, J. E., system sodium iodate, sodium chloride, water, A., 767

Foote, M., Peterson, W. H., and Fred, E. B., fermentation of dextrose and xylose by nodule bacteria from lucerne, clover, pea, and soya bean, A., 1341.

Foote, P. A., non-heptane constituents of Jeffrey pine, B., 493.

Foote, P. D. See Smith, W. O. Foott, C. H., effecting an intimate contact between two fluids, (P.), B., 543.

Foott, C. H. See also Donelly, J. T.

Forbes, J. C., and Irving, H., electrometric determination of chlorides in whole blood and tissues, A., 1191.

Forbes, J. C. See also Haskell, C. C.

Force, E. B., and Carborundum Co., laboratory muffle [for metal

recovery], (P.), B., 519.
Ford, (Miss) G. W. See Hankins, G. A.
Ford, J., spraying of liquids, (P.), B., 308. Ford Instrument Co., Inc. See Ranson, R. Fordyce, C. R. See Pringsheim, H.

Foresti, B., catalysis by the action of subdivided metals. IV. Adsorption isotherms of hydrogen, ethylene, and ethane, A., 874.

Forjas, A. P., spectrochemistry of Portuguese mineral waters; the water of Cambres, A., 1417. Müntz nitrification process, B., 992.

Formanek, J., influence of substitution of halogens, alkyl and amino-groups on the colour and absorption spectra of indigotin, thioindigotin, and indirubin, A., 11. Formicola, P. See Di Macco, G.

Forrer, R., two Curie points, ferromagnetic and paramagnetic, A., 752.

structure of the atomic magnet in ferromagnetic materials, A., 1224.

Forrest, R. See also Weiss, P. Forrest, H. O., Roberts, J. K., and Roetheli, B. E., effect of inhibitors on the acid dissolution of copper and copper alloys, B., 98.

effect of additions of lime and soda ash to brackish water on the corrosion of iron and steel, B., 174.

Forró, (Frl.) M., change of the dielectric constants of air and carbon dioxide with wave-length in the range 600-60 metres, A., 380.

sodium chloride phosphor containing cuprous salt, A., 979. Forsberg, E. A., and Aktiebolaget Separator-Nobel, separation of paraffinous constituents from fluid hydrocarbons, (P.), B., 235\*.

Forsen, L., production of hydraulic cement composition, (P.), B., 558\*.

Forster, R, anomalous dispersion in the X-ray region, A., 1130. Forti, (Signa.) C, action of vapours of ethyl and methyl alcohols, ether, and chloroform, and of illuminating gas on leucocytes, A., 468.

action of certain alkaloids on leucocytes isolated from the organism, A., 1196.

Fortunatov, N. See Rabinovitsch, M. Forward, C. B., refining of oil, (P.), B., 424.

Foshinder, R. J., calcium amalgam electrode in dilute aqueous solutions, A., 769.

Fosse, R., and Bossuyt, (Mile.) V., determination and characterisation of allantoin, A., 196.

Fosse, R., and Brunel, A., an enzyme [effecting hydrolysis of allantoin], A., 353. fermentative formation of allantoic acid from allantoin, A.,

Fosse, R., Brunel, A., and De Graeve, P., biochemical determination of allantoin in presence of carbamide, A., 847. biochemical determination of allantoin in urine, A., 953

enzymic transformation of uric acid into allantoic acid, A., 1107.

allantoinase and the origin of allantoic acid in vegetables, A., 1498.

Foster, B. W., White, A. G., and Imperial Chemical Industries, Ltd., manufacture of fuse compositions, (P.), B., 494.

Foster, E. S., organic agents as aids to adhesion and suspension

of glazes, B., 473.

Foster, G. L., isolation of di-iodotyrosine from the thyroid, A., 119Í.

Foster, H. D. See Ingherg, S. H.

Foster, J. S., effect of electric and magnetic fields on the helium spectrum, A., 364. effect of combined electric and magnetic fields on the helium

spectrum, A., 364.
Foster, J. S., and Chalk, L., relative intensities of Stark com-

ponents in hydrogen, A., 616. Foster, J. S., and Rowles, W., patterns and Paschen-Back ana-

logue in the Stark effect for neon, A., 615.

Foster, M. D., determination of borate in natural waters, B.,

Foster, R. W. See Nahikian, K. M.

Foster Wheeler Corporation. See Brocklebank, A. P., and Primrose, J.

Follary R. E. See Gilman, H. Foulds, R. P. See Tootal Broadhurst Lee Co. Foulk, C. W., theory of liquid film formation, A., 1232. Foulk, C. W., and Horton, P. G., preparation of antimony-free arsenious oxide and the determination of minute amounts of antimony in arsenious oxide, A., 1160.

Foulk, C. W. See also Caley, E. R.

Fouque, H. R., treatment of waste accruing from removal of fibres from the agave and like plants, (P.), B., 146.

Four Chimique Rotatif Société Anonyme. See Tocco, L.

Fourment, M., surface treatment of metals, (P.), B., 858\*. Fourneau, E., solution of ammonium salt of hydroxyacetylaminophenylarsenic acid, (P.), B., 265\*. Fourneau, E, and Nicolitch, V, optically active isomerides of

N-phenyl- $\beta$ -methylglycineamide-p-arsinic acid and their use in the resolution of ephedrine, A., 202.

Fournier, G., quantity allowing a new classification of atoms, A.,

Fourton, A. See Bourcet, P.

Fowler, A., are spectrum of silicon, A., 733. Fowler, D. E., and Snell, J. F., analysis of maple products. Modification of the Canadian lead method. XI. Composition of the Canadian lead precipitate, B., 298.

Fowler, R. H., thermionic emission constant A, A., 230.

the structure of atomic nuclei, A., 623.

Fowler, R. H., and Kapitza, P., magnetostriction and the phenomena of the Curie point, A., 751.

Fowler, R. H. See also Stern, T. E.

Fowles, G. See Druce, J. G. F.

Fowlie, P. See Dodds, H. H.

Fox, A. L., and Whitmore, F. C., mercuration in alkaline solution, A., 1091.

Fox, C. E., cleansing of waste lubricating and other oils [by treatment with water], (P.), B., 349.
Fox, E. L. See Carpenter, T. M.

Fox, J. J., applications of recent analytical methods, A., 415. Fox, J. T. See Gosden, M.

Fox, W. F., and Natural Color Pictures Co., production of coloured photographs, (P.), B., 38.

Frankel, S., and Monasterio, G., generative glands. I. The substance C<sub>6</sub>H<sub>13</sub>O<sub>5</sub>N<sub>6</sub>Me<sub>3</sub> in testes, A., 1328

protein-sulphuric acid ester from the anterior lobe of the pituitary, A., 1329. protein-sulphuric acid ester in the liver, A., 1329.

new amino acid from hæmoglobin, A., 1476. Fraenkel, W., and Gödecke, W., inverse segregation [in alloys], B., 982.

Fraenkel, W., and Marx, L., age-hardening aluminium alloys,

Fränkl, M., cold interchanger for gas separation plant, (P.), B., 579.

Franz, H. See Bothe, W.

Frame, J. See Lukes, R. Frame, A. W., non-granulating sugar compositions, (P.), B.,

Frame, D., making wheat-meal bread, (P.), B., 301.

Francaviglia, A., spleen and carbohydrate metabolism, A., 597. colloidal metals and glycolysis, A., 720.

France, A., apparatus for classifying or separating granular materials, (P.), B., 191. plant for washing coal and other minerals, (P.), B., 349\*, 1005.

France, W. G. See Ort, J. M.

Francesconi, L., origin of ethereal oils in plants, A., 107, 1345. Francis, A. W., continuous laboratory extractor for liquids, A.,

Francis, A. W., and Oxnard, E. P., volumenometer, A., 1162. Francis, W., and Wheeler, R. V., composition of coal: its rational

analysis, B., 5. Francis, W. See also Thiessen, R.

François, G. von. See Karrer, P.

François, M., mercurammonium iodides, A., 524.

action of gaseous ammonia on mercuric bromide and on mercuric chloride, A., 896, 1250.

dissociation of the compounds HgBr2,2NH3 and HgCl2,2NH3, A., 1388.

François, M., and Seguin, L., determination of methylene-blue, A., 1084.

analysis of insecticides; liquid insecticides immiscible with water; hydrocarbon mixtures, carbon tetrachloride, nitrobenzenc, naphthalene, methyl salicylate, B., 222, 532\*. François, M. T., I. Marine animal oils. II. Influence of solute

on the molecular depression of the freezing point in benzene and nitrobenzene, B., 860.

Françon, M., significance of the "packing fraction," A., 372.

Françon, M. See also Richards, T. W.

Francotte, R., luminous electric discharge tube, (P.), B., 901. Frandsen, J. H. See Phillips, A. W.

Frank, (Miss) A. See Van Vleck, J. H. Frank, A. R. See Caro, N.

Frank, F., gas from brown coal, B., 765.

Frank, F. See also Burkhardt, O.

Frank, G., laboratory apparatus for producing homogeneity, A.,

Frank, G. See also Huggins, M. L.

Frank, H. S., low-pressure adsorption on a washed glass surface, A., 1000.

Frank, M. See Wang, C. C.

Frank, O. E., and Frank Heater & Engineering Co., Inc., O. E., heat interchanger, (P.), B., 2.

Frank Heater & Engineering Co., Inc., O. E. See Frank, O. E. Franke, A. [with Gomolka, H.], "ring contraction" during the formation of internal ethers (oxides) from glycols, A., 1422.

Franke, A. See also Siemens, K. F. von.

Franke, K. See Hülse, W.

Franke, P., separating from water tarry substances dissolved therein, (P.), B., 273.

Franke, W., stability of iron-complexes, A., 1408. Franke, W. See also Wieland, H.

Frankel, M., disaggregating action of pepsin, A., 723.

Frankenberger, E., measurement of refractive index of water between wave-lengths of 23 and 73 cm., A., 635.

Frankenburger, W., reaction kinetics of heterogeneous catalysis, A., 772.

Frankenburger, W., and Mayrhofer, K., finely-divided iron of atomic dimensions, A., 1408.

Frankenburger, W., and Zell, R., action of optically excited mercury atoms on hydrocarbon molecules, A., 659.
Frankenburger, W. Sce also Mittasch, A.
Franklin, R. G. Sce Smith, H. G.

Franta, I. See Kranz, C. Franz, H. See Bothe, W. Franz, G. S., relation of water-soluble, replaceable, and acidsolublo potash to the potash removed by crops in pot experiments, B., 905.

Fraser, A., colloid mill, (P.), B., 116\*.

Fraser, K., and Fraser & Co., W. J., rotary drum for drying

machines, (P.), B., 267.

Fraser, L. S., and Rich, F. L., treatment of noxious and other

fumes, (P.), B., 628.

Fraser, R. P. See Bone, W. A.

Fraser, R. R., Harris, C. F., Hilton, R., and Linder, G. C., arterial carbon dioxide pressure in cardiac dyspnæa, A., 595.

Fraser, T., separation of mixed materials, (P.), B., 1000. Fraser & Co. Ltd., W. J. See Fraser, K.

Frattura, M. Sce De'Conno, E.

Frayne, J. G., influence of foreign gases on the intensities of the magnesium resonance lines 4571 and 2852, A., 1206. unclassified lines of the indium are spectrum, A., 1352.

Frayne, J. G., and Montgomery, C. G., variation in the intensities of mercury spectrum lines with pressure of the vapour, A.,

Frazer, G. E. See Poulter, T. C., and Trimble, H. M. Frazer, J. H., optical study of adsorbed films, A., 503.

adsorption of air and water vapour on rock-salt surfaces, A.,

Frazier, C. E., and Sylvester, J., lehrs, (P.), B., 598.

Frazier, W. C., and Rupp, P., proteolytic bacteria of milk. III. Action on caseinogen and gelatin, A., 219. proteolytic bacteria of milk. IV. Action of proteolytic milk

bacteria on amino-acids and other simple nitrogenous compounds, A., 608.

Frear, D., Styer, J. F., and Haley, D. E., effect of hydrogen-ion concentration on the growth of Agaricus campestris, A., 612. Frear, G. L., and Johnston, J., solubility of calcium carbonate

(calcite) in certain aqueous solutions at 25°, A., 997. Frebold, G., Harz mineral fields. IV. Occurrence of pyrrhotine

and origin of antimony, nickel, and cobalt in the Rammelsberg minerals, A., 45.

Fréchette, H., and Phillips, J. G., correction of an extreme case of cracking in the drying of brick, B., 356.

Freckmann, Brouwer, Staerk, and Siegert, effect of quantity of precipitation and large applications of nitrogen on the yield and behaviour of hay and pasture meadows, B., 906.

effect of heavy mineral nitrogenous fertilisation on clover, B., 906.

Fred, E. B. See Allgeier, R. J., Foote, M., McCoy, E., Marten, E. A., and Preuss, L. M.

Fredenhagen, K., electrolytic solution tension and the ionic state. IV. Calculation and comparison of the energies of solution and solvation; are electrolytic ions solvated gas ions? A., 397.

electrolytic solution tension and the ionic state. V. Calculation of electrolytic solution tension; mechanism of electrolytic dissociation; nature of the ionic state, A., 513.

electrolytic solution tension and the ionic state. VI., A., 648.

Fredenhagen, K., and Cadenbach, G., preparation and electrical conductivity of pure hydrogen fluoride, A., 411.

Fredenhagen, K., and Dahmlos, J., dielectric constants of liquid

hydrogen fluoride, A., 380. density, internal friction, dielectric constant, and solvent and

ionising powers of hydrogen cyanide, A., 498. Fredenhagen, K., and Krefft, O. T., fluorine and chlorine, an explosive gaseous mixture, A., 664.

electrolytic production of fluorine from fused potassium fluoride, A., 1402.

Fredenhagen, K., and Suck, H., combination of alkali metals with carbon. II., A., 410.

Frederikse, W. A. See Bijvoet, J. M.

Fredga, A., selenocyanopropionic acid. I., A., 426.

thiocyanopropionic acids, A., 1284. selenocyanopropiomo acid. II. a-Selenocyanobutyric acids, A., 1285.

Fredrickson, W. R., rotational structure of the red bands of sodium, A., 1117.

magnetic rotation lines in the red sodium bands, A., 1351. Freed, S., and Spedding, F. H., line absorption spectra in solids

at low temperatures in the visible and ultra-violet regions of the spectrum, A., 490, 1362.

Fréedericksz, V., and Zolina, V., use of a magnetic field in the measurement of the forces tending to orient an anisotropic liquid in a thin, homogeneous layer, A., 743.

Fréedericksz, V. See also Andreev, A.

Freedman, P., metallic-vapour lamps for producing ultra-violet radiation, (P.), B., 649.

metallic-vapour lamps and gaseous-discharge devices, (P.), B.,

Freedman, P., and Rickets, W. J., piezo-electric substances, (P.), B., 649.

Freeman, H. B. See Abbot, C. G.

Freeman, L. M., spectrum of the solar corona, A., 967.

Freeman, J. R., jun., and Solakian, H. N., effect of service on endurance properties of rail steels, B., 981.

Freeman, L. J., spectrum of doubly-ionised nitrogen (N III), A., 1.

spectrum of ionised nitrogen (N II), A., 965. Freeman, M. See Holden, H. F.

Freeman, S. B., and Imperial Chemical Industries, Ltd., removing oil, grease, and like foreign matter from the interior surfaces of steam condensers, (P.), B., 800.

Freeport Sulphur Co., Burns, H. S., and Bushnell, L. S., protecting pipes from corrosion, (P.), B., 944.

Freeport Sulphur Co., and Bushnell, L. S., protecting pipes from

corrosion, (P.), B., 944.

Frehrs, H., packing material for soft soap, (P.), B., 938.
Freier Grunder Eisen- & Metallwerke Ges.m.b.H. See Steffe, W. Freise, F. W., low-temperature carbonisation of Brazilian coals, B., 41.

Freise, F. W. See also Barsky, G.
Frejka, J., and Zahlová, (Mile.) L., catalytic reduction of dioximes; preparation of βy-diaminobutane by reduction of dimethylglyoxime, A., 544.

French, E. H., recovery of resinous by-products in the manu-

facture of wood pulp, (P.), B., 203.

French, H. J., and Hamill, T. E., hot aqueous solutions for quenching of steels, B., 1017. French, H. J., Rosenberg, S. J., Harbaugh, W. Le C., and Cross,

H. C., wear and mechanical properties of railroad bearing bronzes at different temperatures, B., 57.

French, H. J., and Staples, E. M., bearing bronzes with and without zinc, B., 820.

French, R. W., staining of elastic tissue, A., 342.

Frenkel, E., painting process, (P.), B., 610. Frenkel, H. See Frenkel, E.

Frenkel, J., wave mechanics of rotating electrons and the fundamental equation of the electromagnetic field, A.,

Frenkenberg, S. See Jaticzyński, K. Frérejacque, M., configuration of tervalent nitrogen, A., 72. Frères Koechlin, printing with indanthrene and other vat dyes,

B., 715. Freri, M. See Quilico, A.

Frerichs, G., detection of lead and copper in citric acid, tartaric acid, and extracts, B., 35.

detection of hydrogen peroxide with potassium permanganate

solution according to D.A.B. VI., B., 938.

Fretter, F. B., and National Refining Co., treating [cracking] fluid hydrocarbons, (P.), B., 669.

Freud, B. B., and Harkins, W. D., shapes of drops, and the determination of surface tension, A., 1001. Freud, B. B. See also Harkins, W. D.

Freudenberg, E., rickets, A., 1482.

Freudenberg, K., lignin and cellulose. IX. Cellulose, A., 430.

Freudenberg, K., Belz, W., and Niemann, C., lignin and cellulose.

X. Aromatic nature of lignin, A., 915.

Freudenberg, K., and Dirscherl, W., insulin. III. Standardisation of insulin, A., 357.

Freudenberg, K., Dirscherl, W., and Eyer, H., insulin, A., 1110.

Freudenberg, K., and Raschig, K., acetone [isopropylidene] sugars. XVI. l-Altromethylose, chinovose, and digitoxose; system of the methylpentoses, A., 427.

Freudenberg, K., Zocher, H., and Dürr, W., lignin and cellulose. XI. Lignin, A., 1046.

Freund,  $\tilde{K}$ . See Grafe, V.

Freundlich, H., structure of colloidal particles and composition of sols and gels, A., 26.

thixotropy, A., 137.

Freundlich, H., and Burgess, L. L., a case of the reversal of adsorption, A., 878.

Freundlich, H., and Greensfelder, B. S., inhibitive effect of starch on the velocity of coagulation of goethite sols by electrolytes, A., 1144.

Freundlich, H., Joachimsohn, K., and Ettisch, G., significance of the adsorption of ions by colloid particles in coagulation by electrolytes, A., 758.

Freundlich, H., and Krüger, D., diffusion in hydrotropic solutions, A., 502.

Freundlich, H., and Lindau, G., action of proteins on colloidal ferric hydroxide, A., 265.

action of proteins on ferric hydroxide sol, A., 879. Freundlich, H., and Loebmann, S., mechanical coagulation as a coagulation at the surface of contact, A., 263. mechanical coagulation of goethite sol, A., 762.

Freundlich, H., and Söllner, K., explanation of the "electro-capillary" Becquerel phenomenon, A., 145. explanation of oligodynamic action, A., 348.

Frey, A. A., manufacture of iron or alloys thereof, (P.), B., 524. Frey, E., effect of light on the secondary electron emission of aluminium, A., 1122.

Frey, K. See Staudinger, H.

Frey, M. See Barrenscheen, H. K. Frey, R. W., Leinbach, L. R., and Reed, E. O., analyses of some English bookbinding leathers, B., 485.

Frey, V. M., manufacture of finishing lime, (P.), B., 56.

Freyer, E. B. [with Hubbard, J. C., and Andrews, D. H.], physical properties of liquids. I. Sonic interferometer; velocity of sound in some organic liquids and their compressibilities, A.,

Freygang, W. H. See Kidde & Co., Inc., W.

Freymann, A., distillation of liquids; apparatus for recovering alcohol from vapours, (P.), B., 534.

Freyn Engineering Co. See Hayes, J. C., jun., and Willcox,

F. H.Frézouls, J., analysis of coffee adulterated by addition of chick

peas, B., 908.

Frick and Engemann, colorimetric determination of bismuth, A., 1033.

separation of bismuth from lead. I., A., 1033. Frick, F. F. See Donahue, T. H., and Laist, F. Fricke, A. See Krauss, F.

Fricke, G., glycosuria and insulin, A., 1201.

Fricke, H., oxidation of ferrous sulphate in aqueous solution by X-rays of different wave-lengths; determination of Compton absorption, A., 1406.

Fricke, H., and Morse, S., action of X-rays on ferrous sulphate solutions, A., 408

Fricke, R., crystalline hydrated aluminium hydroxide of von Bonsdorff. II., A., 749.

is the lattice of tetragonal mercuric cyanide a molecular or a

radical lattice? A., 988. Fricke, R., and Humme, H., two forms of crystalline beryllium

hydroxide, and the system BeO-Na<sub>2</sub>O-H<sub>2</sub>O, A., 399. Fricke, R., and Lüke, J., thermodynamic requirements of concentrated solutions, A., 1386.

Fricke, R., and Meyring, K., gallium. II., A., 43.

Fricke, R. See also Schenck, R.

Fridericia, L. S., and Gudjónsson, S. V., relationship between the ability to darken photographic plates and the vitamin-A content of cod-liver oil and pig's fat, A., 221.

Fried, E., micro-determination of serum-protein, A., 207.

Friedebach, M., standardisation of oil testing, B., 86. standardisation of oil testing, B., 232

Friedel, W., apparatus for determination of m. p., A., 1033. Friedemann, T. E., and Kendall, A. I., determination of lactic acid, A., 677.

determination of carbon and carbon dioxide, A., 712.

Friedemann, W. G., method for comparing the value of ammonianitrogen and nitrate-nitrogen [for plants], B., 788.

Friedenson, M., Rosenbaum, M. K., Thalheimer, E. J., and Peters, J. P., cutaneous and venous blood-sugar curves. I. Normal individuals after insulin, and with liver disease,

cutaneous and venous blood-sugar curves. II. Benign glycosuria and diabetes, A., 841.

Friederich and Buhr, mercury poisoning and its chemical detection, A., 784.

Friederich, W. See Eschbach, W.

Friedheim, E. A. H., oxidation-reduction potentials of mammalian

tissues, A., 1106.

Friedlaender, H. Sco Spicers, Ltd.

Friedländer & Co., E., and Fuchs, P., preparing and subscquently briquetting non-caking fuels, (P.), B., 631.

Friedländer, G. See Tschirch, A.

Friedländer, L., cellulose cooking with hot water as the heating

agent, B., 90.

Friedman, C. S., and Anciens Etablissements A. Combe & Fils & Cie., Société Anonyme, production of washable printings on leather, (P.), B., 653\*.

Friedmann, A. See Friedmann, L.

Friedmann, L., Schopp, N. (Friedmann, A.), and Nemetz, G., pumps for viscose or other liquids, (P.), B., 353.

Friedrich, A., micro-determination of methoxyl and ethoxyl groups, A., 948.

micro-determination of methylimides, A., 949.

centrifuge tube with detachable bottom, A., 1261.

microanalytical determination of sulphur in organic compounds by a volumetric method, A., 1323

Friedrich, A., and Salzberger, A., lignin. V. Relation of lignin

and resin, A., 1429.

Friedrich, C. See Friedrich, K.

Friedrich, H., determination of carbon dioxido in gases containing acetylene, B., 877.

Friedrich, K., and Friedrich, C., production [by a cold process]

of articles with a glaze-like covering, (P.), B., 520. Friedrich, W. H., production of alkali carbonates from alkali

sulphates by the wet process, (P.), B., 244.
Friedrichs, F., determination of water by means of difficultly inflammable liquids, A., 667.

Friedrichs, J., standardised ground-glass apparatus, A., 167. extraction apparatus for liquids. II., A., 417.

Friend, J. A.  $\hat{N}$ , hydrates of lithium sulphate and their solubility in water between -16° and 103°, A., 1375.

dissolution of plain and amalgamated zincs in electric batteries, B., 289.

relative corrodibilities of ferrous and non-ferrous metals and alloys. II. Results of seven years' exposure to air at Birmingham, B., 854

final report on the relative corrodibilities of various commercial forms of iron and steel; results of prolonged exposure to the atmosphere, and general conclusions from all the tests, B., 943.

Friend, J. A. N., and Pritchett, E. G. K., stability of ferrous sulphate solutions and their use in standardising permanganate, A., 165.

Friend, J. A. N., and Thorneycroft, W. E., resistance of zinc to

indentation, B., 327.
Friend, J. A. N., Townley, J. E., and Vallance, R. H., solubility of sodium ferrocyanide in water between 0° and 104°, A., 1375. silver contents of specimens of ancient and mediæval lead, B., 327.

Friend, R. O., Partridge, E. M., and Permutit Co., preparation of base-exchange silicate, (P.), B., 814.

Fries, J. A., volumeter using water as the measuring medium, A.,

Fries, K., and Hemmecke, E., thionaphthens, A., 823. Fries, K., Koch, H., and Stukenbrock, H., thianthrene. III. I. 2:3:6:7-Tetramethoxythianthrene and its oxidation products. II. Amino-derivatives of thianthrene, A., 575.

Fries, K., and Küster, A., o-quinamines of the naphthalene series and their rearrangement into homologues of  $\beta$ -naphthylacetic

Fries, K. See also I. G. Farbenind. A.-G. Friese, H., lignin. I. Acetylation and preparation of degradation products soluble in water, A., 1428.

Friese, W., mineral constituents of fungi, A., 1346.

Friesen, S. von, atomic spacing in gypsum, A., 749. Frietinger, G., evolution of carbon dioxide and absorption of oxygen in germinating seeds, A., 105.

Frigerio, M., copper content of the leaves of beet treated with copper preparations, B., 408.

Frigidaire Corporation, and Hull, H. B., refrigerating systems and apparatus, (P.), B., 665.

Frilley, M., spectrography by crystal diffraction of  $\gamma$ -rays of the

radium group, A., 971.

Frink, R. L., composition of matter resistant to high temperature

and its manufacture, (P.), B., 324. [refractory] heat exchanger, (P.), B., 800. Frisch, R. A., Mendel, L. B., and Peters, J. P., production of odema and serum-protein deficiency in white rats by lowprotein diets, A., 1485.

Frisch, S. See Ferchmin, A.

Frischer, H., concentration of nitric acid, (P.), B., 52. apparatus for treating solutions, (P.), B., 580.

Fritsche, R., photographic printing, (P.), B., 494. Fritz, E. H. See Kraner, H. M.

Fritz, H., sensitivity of some colorimetric reactions as determined by an electrochemical method, A., 1414.

Fritz, J. J., centrifugal soparator, (P.), B., 192.

Fritzmann, E., nomenclature of inorganic compounds, A., 904. osmium tetroxide, A., 1157.

preparation of acetic anhydride, B., 510, 1007. Frivold, O. E. See Schreiner, E.

Friz, N., determination of sugar in dry [beet] slices, B., 952.

Froemke, J. A. See Anderson, E. X. Fröschl, N., and Zellner, J., chemistry of the higher fungi. XX. Omphalia campanella, Batsch., Marasmius scorodonius, Fr., Boletus cavipes, Opat., and Calocera viscora, Pers., A., 108. fungi resins, A., 1456.

Frolich, P. K., Davidson, R. L., and Fenske, M. R., catalysts for the formation of alcohols from carbon monoxide and hydrogen. III. X-Ray examination of methyl alcohol catalysts composed of copper and zinc, A., 406.

Frolich, P. K., Fenske, M. R., Perry, L. R., and Hurd, N. L., copper catalysts prepared from precipitated hydroxide. II. Comparison of sodium hydroxide and ammonia as a pre-

cipitating agent, A., 274.
Frolich, P. K., Fenske, M. R., and Quiggle, D., copper catalysts prepared from precipitated hydroxide. I. Activity as: a function of the temperature of precipitation, A., 274.

Frolich, P. K., Fenske, M. R., Taylor, P. S., and Southwich, C. A., jun., catalysts for the formation of alcohols from carbon monoxide and hydrogen. II. Synthesis of methyl alcohol with catalysts composed of copper and zinc, A., 153.

Frolich, P. K., Harrington, P. J., and Waitt, A. H., oxidation of

methane with nitrogen peroxide, A., 289.

Frolich, P. K. See also Cryder, D. S.

Frolov, S. S., and Svetlyakov, K. O., analysis of zinc dust, B.,

Fromageot, C., asymmetric utilisation of p-isobutylphenol in the animal body, A., 845.

sulphatase. XI. Stereochemical specificity of sulphatase, A.,

adsorption of organic acids by charcoal, A., 1140.

Fromandi, G. See Hock, L.

Fromandi, P., effect of silent electric discharge on caoutchouc and decalin, A., 72.

Fromherz, H., influence of adsorbed silver and bromide ions on

light absorption by silver bromide hydrosols, A., 28. measurement of absorption spectra in the visible and ultraviolet regions, A., 119.

Fromherz, H., and Karagunis, G., influence of adsorbed ions on the light absorption and photochemical sensitivity of silver bromide-gelatin emulsions, A., 28.

Fromherz, H., and Menschick, W., optical relationship between alkali halido phosphors and complex salt solutions, A., 626. simple interferometer for the measurement of small thick-

nesses, A., 671. Fromherz, K., glucosides of Adonis vernalis, A., 106.

Fromm, E., and Kapeller-Adler, R., tautomerism of some hetero-

cyclic compounds [oxazolines, thiazolines], A., 199.

Fromm, E., and Leipert, T., modification of f.-p. determinations for small quantities of biological fluids, A., 730.

Frommer, L., and Pólányi, M., heterogeneous reactions between elements. I. Action of chlorine on copper, A., 32.

Frost, A., determination of chloride ion in reagents, A., 1029.

Frost, M. M., production of fibre articles, (P.), B., 1042. Fruergaard, J. S. J., mixing apparatus [for disinfecting grain, etc.], (P.), B., 762.

Fruitier, L. See De'Conno, E.

Frumkin, A., formation of sulphur films on a mercury surface, A., 502.

adsorption of phenols at the interfaces water-air, watercharcoal, and water-mercury, A., 641.

Frumkin, A., and Obrutscheva, A., electrocapillary curvo of mercury, A., 145.

Frumkin, A., and Williams, J. W., relation between the electric moment and the P.D. at an interface, A., 866.

Frumkin, A. See also Bruns, B., and Burstein, R.

Fruwirth, C., hot fermentation of manure and weeds, B., 410. Fry, A., and Krupp Akt.-Ges., F., treatment of low-carbon steel, etc., (P.), B., 216\*.

manufacture of articles [iron and stool alloys] for which a resistability against the noxious effect of aged state is required, (P.), B., 900\*.

Fry, H. S., and Gerwe, E. G., action of ultra-violet light on ferric citrate solutions, B., 110.

Fry, J. D., and Porritt, B. D., causes of deterioration of ebonite when exposed to light and air, B., 828. Fry, (Sir) J. P. See Williams, W. M. Fu, Y. See Bartell, F. E.

Fuchs, (Mmc.) G., Régnier, J., Santenolse, D., and Vare, P., thyroid hormone regulating cerebral excitability, A., 358.

Fuchs, H. J., laboratory apparatus, II., A., 109. [dialysis and extraction] apparatus. III., A., 858.

Fuchs, J., biology of sarcina,  $\bar{B}$ ., 573.

methyleno-blue studies [in the staining of yeast], B., 1028. Fuchs, K., organo-alkali compounds containing sulphur, A., 1434.

Fuchs, K., and Katscher, E. E., action of chlorosulphonic acid on aldehydes, A., 1267.

Fuchs, K. See also Margosches, B. M.

Fuchs, L., and Mayrhofer, A., application of various micromethods in qualitative toxicological and pharmaceutical analysis, B., 957.

Fuchs, P., precision valvo for gases and liquids, especially liquid burettes, and a "tapless" burette, A., 288.

unusual course of the solubility of calcium hydroxide in dilute solutions of sucrose, A., 913.

rapid volumetric determination of formic and acetic acids in presence of each other, A., 1323.

dropping bottle for reagents, A., 1415.

refractometry of liquid mixtures with the Zeiss butyrorefractometer; investigations on certain motor spirits, B.,

[determination of free alkali in hypohalogenite solutions], B.,

two pieces of apparatus for measuring the sp. gr. of liquids by means of a hydrometer, B., 663.

Fuchs, P. See also Friedländer & Co., E.

Fuchs, S. See I. G. Farbenind. A.-G.

Fuchs, W., action of calcium hydride on diphenylene oxide, A.,

humic acids, A., 1275.

lignin. XI. Degradation of lignin with methylglycolic [\$\beta\$methoxyethyl-alcoholic] hydrogen chloride, A., 1282.

artificial humification of carbohydrates, with particular reference to the formation of so-called humic acids from cellulose,

Fuchs, W., and Horn, O., lignin. III. Action of diazomethane on pine wood, A., 1046.

lignin. XII. Acetylated hydrochloric acid lignin, A., 1428. Fuchs, W., and Stengel, W., hydroxyl and carboxyl groups in humic acids, B., 771.

Fuchs, W. See also Klein, G.

Fuel Development Corporation. See Hammond, G.

Fuentes, B. V., Duomarco, J., and Munilla, A., chemical modifications of blood following intravenous injection of urea, A., 1326.

Fürst, F. See Weigert, Fürst, K. See Sachs, G. See Weigert, J.

Fürth, J., and Landsteiner, K., precipitable substances of bacilli of the Salmonella group, A., 1200.

Fürth, O., and Kaunitz, H., oxidation of physiological substances by animal charcoal, A., 1400.

Furth, R., physical foundations of electrical potential in the organism and direct methods of measurement, A., 845. methods of measuring dielectric constants applicable to biology, A., 858.

Fürth, R., dielectric constants, A., 858.

dispersity and particle size, A., 877.

electrical characteristic of solutions, dyes, and biocolloids, A., 878.

mass-ratio of proton and electron, A., 1123.

masses of proton and electron, A., 1209.

connexion between the quantum mechanics "uncertainty" and the structure of elementary particles, and a calculation of the masses of the proton and electron based thereon, A., 1360,

Fues, E., vector-framework of the atom according to quantum mechanics, A., 117.

Fuha, K., colouring of glass, B., 644.

colouring of glass by bismuth, II., B., 1044.

Fujio, S., corrosion of metals by industrial benzene, B., 721. Fujioka, V., helium bands, A., 363.

Stark effect of helium 2P-6D line by quantum mechanics,

influence of temperature on Raman lines, A., 976. Raman effect on organic substances. I. Raman spectra of simple benzene derivatives. II. Influence of temperature on Raman lines, A., 1361.

Fujioka, Y. See also Nakaya, U.

Fujise, S., decahydroquinoline and its derivatives. V. Synthesis of trans-o-dimethylaminopropylcyclohexane, A., 435, 551. constituents of Matteucia orientalis, A., 1499.

Fujita, B., crystal faces developed by etching metallic crystals of aluminium and zinc, A., 870.

Fujita, S., biochemical studies of pityrol. II. Distillation of rice bran, B., 157.

Fujiu, K., distribution of particles of cements, B., 980.

Fnjiwara, H., arginine metabolism in tuberculosis and carcinoma, A., 1481.

Fujiwara, T., tensile strength and fracture of rolled strips of molybdenum, B., 603.

Fukai, T., detection and determination of methylpentose, A., 836. Fukatn, S. See Goto, M.

Fukui, M., and Miyaguchi, T., manufacture of non-lead face powder or paint, (P.), B., 610. Fukushima, M. See Ishida, Y.

Fulcher, G. S. See Corning Glass Works.
Fuller, A. T. See Carr, F. H.
Fuller, E. W., effect of stearic acid on various crude rubbers, B.,

Fuller, M. L., precision measurements of X-ray reflexions from crystal powders, A., 1367.

Fuller Lehigh Co., furnace walls [comprising water-tubes and tiles], (P.), B., 876.

heat-conducting cement composition, (P.), B., 920.

Fuller Lehigh Co., and Bailey, E. G., furnace walls [comprising water-tubes and metal blocks], (P.), B., 876.
Fuller Lehigh Co., and Hardgrove, R. M., grinding mills, (P.),

B., 1000.

Fuller Lehigh Co., and Shellenberger, R., furnace walls [comprising water-tubes and metal blocks], (P.), B., 876. Fuller Lehigh Co. See also Bailey, E. G., Harter, I., and Jones,

M. D.Fulton, C. C., identification of atropine with Wagner's reagent,

A., 1318. Fulton, H. R., and Coblentz, W. W., fungicidal action of ultra-

violet radiation, B., 447. Fulton, R. R., and Koppers Co., decolorisation of alkaline-earth

thiocyanate solutions, (P.), B., 244. Fulweiler, W. H., Jordan, C. W., and Ward, A. L., effect of indene

on the determination of naphthalene [in gas] with pieric acid, B., 310.

Fulweiler, W. H., and U.G.I. Contracting Co., purification of gases, (P.), B., 198\*.
Fulweiler, W. H. See also Barnes, J.
Funakoshi, N. See Tanaka, K.

Funakoshi, O., sensitive reaction of cuprous ion, A., 901.

Funaoka, S., and Toyota, S., transmicroscopic structure of living bodies. III. Otoliths of Rana esculenta, A., 715.

Funk, C., and Olivier, H. R., study of physiological condition and function by biological analysis of the urine. I. Diagnosis of pregnancy, A., 91.

Funk, H., and Niederländer, K., action of niobium and tantalum pentachloride on organic compounds. III., A., 1039. Funk, I. B., and Union Oil Co. of California, [steam] fractionation

[of hydrocarbons], (P.), B., 234.

Funk, O. See Valet, E. C. H.

See Grasselli Dyestuff Corporation. Funke, A.

Funke, G. L., formation of diastase by Aspergillus oryzæ, A., 473.

Funke, K., Kirchmayr, F., and Wolf, Herbert, perylene and its derivatives, XX., A., 550.

Funke, K., and Wolf, Herbert, perylene and its derivatives. XXIII., A., 923.

Funke, K. See also Zinke, A. Funnell, W. S. See Ferguson, J. B. Fuoss, R. M., bimetallic electrodes for titrations involving a change of hydrogen-ion concentration, A., 1034.

Furman, N. H., and Evans, O. M., ceric sulphate in volumetric analysis. V. Potentiometric study of the reaction between ferrocyanide and cerie ions, A., 669.

Furman, N. H., and Wallace, J. H., jun., ceric sulphate in volumetric analysis. VI. Oxidation of hydrogen peroxide by ceric sulphate; indirect determination of lead, A., 783.

Furnas, C. C., reaction between lubricating oils and phosphorus pentoxide, B., 1039.

Furuichi, M., proteins of the ginkgo, A., 961.

Furukawa, S., constituents of Ginkgo biloba leaves. I., A., 613. Furukawa Denki Kogyo Kabushiki Kaisha, manufacture of storage battery plates, (P.), B., 823.

Furusawa, K. Sco Best, C. H.

Fuson, R. C., and Bradley, R. L., cleavage of ethyl ab-dibromoadipate by secondary amines, A., 425. Fuson, R. C., and Kao, T. Y., mechanism of the cleavage of ethyl

aδ-dibromoadipate by secondary amines; new synthesis of cyclobutane derivatives, A., 794.

Fust, H., disinfectant action of weak acids, A., 1109.

Fuwa, K., Sakai, S., Sato, Masabumi, and Suzuki, F., soda-zinc glasses, B., 978.

Fyhn, S., apparatus for cooling and hardening fluid substances, (P.), B., 269,

Fyr-Fyter Co., fire-extinguishing media, (P.), B., 875.

Gaafar, M. Sco Bey, A. Gabel, G., and Kiprianov, G., pectic acid and methyl alcohol contents of Russian tobacco, A., 1347. degree of hygroscopicity of tobacco, B., 996.

extraction of nicotine from tobacco dust by kerosene, B., 996.

Gabel, L. F., effect of heat on tragacanth and its mucilage, B., 186.

Gabiano, P. See De Mallemann, R.

Gabler, W. See Trautz, M.

Gabor, F., treatment of aqueous dispersions of organic materials such as rubber or the like, (P.), B., 990.

Gabor, F. See also Klein, P.

Gabreels, A. A., and Scherpenberg, A. L. van, volumetric determination of invert sugar by reduction in solutions containing sucrose. IV. Influence of calcium salts on the reduction, A., 1045.

Gaddum, J. H. See Bijlsma, U. G., and Trevan, J. W. Gaebel, R. J. H. See Huebner, J.

Gäbler, C. See Menzel, H.

Gaebler, O. H., animal calorimetry. XXXVIII. Specific dynamic

action of meat in hypophysectomised dogs, A., 346.

Gaede, W., and Keesom, W. H., methods and apparatus used in the cryogenic laboratory. XX. High-vacuum pump, A., 417

Gaertner, O., absolute intensity measurements with X-rays, A.,

Gärtner, S., Pulfrich step-photometer as a turbidity measurer, A., 786.

Gaffre, A., iodometric determination of thiosemicarbazide, A.,

Gagarina, E. D., and Yankovski, V. D., catalase system in animal tissues under different physiological and pathological conditions. II. Determination of catalase and anticatalase in the tissues of normal guinea-pigs and white rats. III. Effect of chronic intoxication with morphine, arsenic, and alcohol, A., 215.

Gagen, O. See Anossov, V. Gagnon, P. See Moureu, C. Galdies, G. See Gen. Electric Co.

Gaillard, P. See Bodin, V. Gaisbock, F. See Jarisch, A.

Gaiser, C., galvanic cell [for pocket lamp batteries], (P.), B., 481. Gál, G. See Kokas, E. von.

Galamini, A., food value of legumes for albino rats, A., 1195.

Galassini, E., percussion fuses for bombs or similar projectiles, (P.), B., 873.

Galbani, E., food product [in cheese envelope], (P.), B., 795. Galbraith, W. T., and Mills, A. E., production of an elastic composition, (P.), B., 295.
Galbraith, W. T. See also Mounsey, J. W.

Gale, W. A. See Ritchie, C. F.

Galecki, A., and Spychalski, R., silver nuclear sol and its derivatives. I. Action of light on these sols, A., 261.

Galehr, O. See Plattner, F.

Galibourg, J., rise of the break in the tensile strength curve of metals due to strain and ageing, B., 398.

Galibourg, J. See also Guillet, L.

Galicyjskie Towarzystwo Nastowe "Galicja" S.A., De Piotrowski, W., and Winkler, J., preparation of valuable compounds from the refining wastes of cracked products, particularly cracked benzines, (P.), B., 509.

Galimberti, L., determination of potassium, A., 163. Galimberti, P. See also Crippa, G. B. Galkin, P. I. See Grigoriev, P. N.

Gall, D. C., electrolytic conductivity bridge, A., 1034.

Gall, H. See Manchot, W.

Gallagher, J. J. See Shaneman, W. J. Gallagher, P. H. See Woodman, R. M. Gallay, W. See Whitby, G. S.

Galle, E. See I. G. Farbenind. A .- G.

Galletti, A., and Cataldo, A. G. di S., recovery and use of sulphur dioxide in sulphur extraction, B., 94.

Galli, F., behaviour of the diastase in the blood, urine, and faces of the dog before and after ligation of the pancreatic ducts, A., 214.

behaviour of pepsin, A., 217.

Gallitelli, P., laumontite of Toggiano, A., 168.

Gallotti, M., [with Ercoli, A.], 2-nitrophenyl- $\alpha\beta$ -naphtha-1:2:3triazolequinones, A., 828.

Gallotti, M. See also Crippa, G. B.

Galloway, A. E. See Brown, R. L.
Galloway, L. D. See Thaysen, A. C.
Gallup, W. D., determination of digestibility of protein by Bergeim's method, A., 466.

Galotti, H. See Leschewski, K. Galperin, D. I. See Scharvin, V. V.

Galter, E. See Philippi, E.

Galunova, K. See Illuviev, V.

Galvez, E., absorption of light in colloid systems as a function of the layer thickness, A., 260. Galvialo, M.J., and Dobrotvorskaja, R., influence of protein on

the catalytic properties of inorganic catalysts, A., 657. Gamarra, C., treatment of gypsum, B., 980. Gamble, C. A. See Zerban, F. W.

Gamble, C. J. See Starr, I.

Gamble, D. L., and Stutz, G. F. A., ultra-violet light-transmission characteristics of some synthetic resins, B., 443.

Gamble, D. L. See also Schmutz, F. C.

Gamble, J. L., and McIver, M. A., acid-base composition of gastric secretions, A., 715.

acid-base composition of pancreatic juice and bile, A., 715. Gamburzev, G. A., diffusion of photoluminescence by repeated absorption and radiation processes, A., 1127.

Gammay, H., manufacture of camphor from borneols, (P.), B., 737.

production of camphene from pinene hydrochloride, (P.), B., 797\*.

Gamow, G., quantum theory of nuclear disintegration, A., 6.

quantum theory of atomio nuclei, A., 7.

quantum theory of atomic disintegration, A., 234. quantum theory of radioactive disintegration, A., 484.

successive a-transformations, A., 486. the structure of atomic nuclei, A., 623.

Gamow, G., and Houtermans, F. G., quantum mechanics of radioactive nuclei, A., 233.

Gams, A. See Society of Chemical Industry in Basle.

Ganassini, D., detection of lead in body-fluids and tissues, A.,

preparation of colloidal lead, A., 1336

Gandrud, B. W., and Britton, S. A., sp. gr. of Alabama coals,

Gane, R., carbohydrate content of detached, partially-shaded leaves, A., 1112.

Gane, R., and Ingold, C. K., electrometric titration curves of dibasic acids. III. Substituted malonic acids, A., 1144

Ganesan, A. S., and Venkateswaran, S., Raman effect in liquids, A., 1215.

Ganguli, A., hydrolytic adsorption by humic acid, A., 502.

Ganguli, A. See also Chaudhury, S. G. Ganguly, P. B. See Lal, P.

Gann, J. A., and Dow Chemical Co., alloy, (P.), B., 134. treatment of light-metal [magnesium] alloys, (P.), B., 754. light metal [magnesium] alloy, (P.), B., 857.

alloy of magnesium, (P.), B., 1019. Gans, D. M. See Harkins, W. D. Gans, R., diffusion of aspherical particles, A., 129.

Gansel, E., effect of sulphonation on the characteristics of fatty acids, B., 923. Gante, J. See Binz, A. Ganter, F. See Bohm, J.

Gapon, E. N., solubility and dissolution velocity of solid substances, A., 132.

solubility and dissolution velocity of solids, A., 998.

hydration of ions and molecules. III. Velocities of hydration and dehydration, A., 1148.

velocity of crystallisation. I., A., 1232.

theory of stability of disperse systems. II. Stability of hydrosols of Prussian-blue, A., 1234.

theory of physical titration, A., 1254.

Gapon, E.N. See also Avdalian, D.Garaca, F., and Luthy Research Laboratories, manufacture of secondary battery plates, (P.), B., 606.

Garbe, E. A., manufacture of [veterinary] disinfectants, (P.), B., 624.

Garbsch, P. See Staudinger, H.

Garchey, B. See Garchey, L. A.

Garchey, L. A., and Garchey, B., freezing mixtures, (P.), B., 171. Garcia, F. Seo Oettingen, W. F. von.

Garcia, J. T., extraction of candelilla wax, (P.), B., 608.

Garcia Banus, A. [with Medrano, L., and Diaz Roldan, M.], organometallie derivatives. IV. Diphenylisochromans, A., 324. Garcia Banús, A., and Calvet, F., 1:2- and 2:3-diphenylindenes,

García-Blanco, J., microdetermination of water in connective tissue, A., 1499.

Gard, E. L. See Smith, George Frederick. Gard, S. See Euler, H. von.

Gardiner, G. See Rees, E.

Gardiner, J. de B. W., protective coatings for metal, wood, or other surfaces, (P.), B., 980.
Gardiner, R. F. See Walton, G. P.
Gardiner, W. C., and Hulett, G. A., hydrolysis of mercurous

sulphate by cadmium sulphate solution in the Weston normal cell, A., 1392.

oxidation of the depolariser in preparing standard cells, A., 1392.

Gardiner, W. C. See also Summers, D. B.

Gardner, C. E., apparatus for spraying or atomising liquids, (P.), B., 628.

Gardner, D., manufacture of puro colophony and other resinous products from resinous plants or woods, (P.), B., 610. soil fertilisation, (P.), B., 831.

Gardner, E. D., and Stein, E., explosibility of sulphide dusts in

metal mines, B., 287.

Gardner, F., decolorisation of hydrocarbon oils, (P.), B., 1006. Gardner, H. A., treatment [delustring] of artificial silk, (P.), B., 169, 430\*.

crystallising lacquers and toluol resins, B., 483. insulating [cellulosic] filament, (P.), B., 986.

Gardner, H. A., Knauss, C. A., and Heuckeroth, A. W. van, light-coloured condensation resin, B., 255.

Gardner, H. A., and Levy, S. A., pigment and colour index, B., 690. Gardner, H. W., Smith, J. Hunter, Reid, J. W., and Williams, H. R., nitrogenous manuring of grassland, B., 731. Gardner, W. See Greaves, J. E.

Gardner, W. H., and Whitmore, W. F., nature and constitution of shellac. I., B., 404.

nature and constitution of shellac. II. Potentiometric titrations in 95% ethyl alcohol, B., 1046.

Gareau, N. J., production of alumina, sodium carbonate, and hydrochloric acid, (P.), B., 322.

Garello, A. See Bonino, G. B. Garey, J. P. See Eclipse Textile Devices, Inc.

Garino, M., and Rege, A., decolorising carbons and their action on the colouring matters of beet molasses, B., 411.

Garino, M., Regè, A., and Rubino, F., colouring matters of beet molasses, B., 411.

Garino, M., and Tosonotti, A., colouring matters formed by the caramelisation of sucrose and by the action of lime on invert sugar, B., 372.

Garnak, A., manufacture of selenium, B., 813.
 Garner, F. B., and Sugden, S., parachor and chemical constitution.
 XIII. Some compounds of titanium and tin, A., 984.

Garner, F. H., analysis of cracked spirits; determination of aromatic, olefine, naphthene, and paraffin hydrocarbons, B., 84. Garner, T. L., formation of glycerides and their isomerides, B.,

evaluation of anti-oxidants [for rubber], B., 181. tackiness of unvulcanised rubber, B., 445.

Garner, W. E., and Gillbe, H. F., ionisation of aromatic nitro-compounds in liquid ammonia. II., A., 29.
Garner, W. E., and King, (Miss) A. M., alternation in the heats of crystallisation of the normal monobasic fatty acids. IV., A., 1225

Garner, W. E., and Kingman, F. E. T., area of internal surface of charcoal as determined by the adsorption of normal aliphatic alcohols from aqueous solution, A., 134.

Garner, W. E., and Lennard-Jones, J. E., molecular spectra, A., 1363

Garner, W. E., and Roffey, F., effect of the addition of hydrogen and water on the radiation emitted from the carbon monoxide flame, A., 973. Garner, W. E. See also Bull, H. I., and Tawada, K. Garnett, H. J. See Smith, W. S.

Garnotel, R. J., intensification of autochromes by dye-toning,

Garreau, (Mlle.) Y., and Marinesco, N., dielectric polarisation of solutions of egg-albumin, A., 1142.

Garrett, J. W., and Hurd, C. D., toy balloons and filtration,

A., 44.

Garrick, F. J., energy of hydration of hydroxyl ion and the lattice energies of alkali hydroxides, A., 1388.

Garside, H. See Hüttig, G. F.

Garstang, T. See Campbell, Achnach, & Co., Ltd.

Gartlein, C. W., first spark spectrum of arsenic, As II, A., 1352.

Gartlein, C. W. See also Gibbs, R. C.

Gas Accumulator Co. (United Kingdom), Ltd., and Autogen Gasaccumulator Akt.-Ges., manufacture of porous masses for storing explosive gases, (P.), B., 9.

Gas Light & Coke Co., Adam, W. G., and Potter, F. M., distillation of oils, coal tar, and other liquids, (P.), B., 196.

Gas Light & Coke Co., Hollings, H., and Neath, J., carbonisation of coal, wood, peat, and other ligneous material, (P.), B., 195. Gas Research Co. See Smith, H. F.

Gas & Teer Ges.m.b.H., regenerative water-gas producers, (P.), B., 969.

Gasgo Power Corporation. See Dickerman, A. E.

Gasified Fuel, Ltd., Hazlehnrst, H. E., and Margetson, O., apparatus for burning pulverised fuel, (P.), B., 10.

Gasifier Co. See Reichhelm, G. L. Gasiorowski, S., and Pilat, S., "tar value" of lubricating oils, B., 232.

Gasoline Corporation. See Greenstreet, C.J., and Hildebrandt, W.Gasoline Products Co., Hargrove, G. C., and Montgomery, W. B., cracking of hydrocarbons, (P.), B., 120.

Gasoline Products Co. See also Black, J. C., and Cross, W. M. Gaspar y Arnal, T., reactions of molybdates, nitrophosphomolybdates, tungstates, and phosphotungstates, A., 417.

Gašperik, S. J. extraction apparatus, A., 417.

Gass, G. P., and Jackson & Bro., Ltd., bleaching and dyeing plants, (P.), B., 354.

Gassmann, A. See Rupe, H.

Gastaldi, C., and Princivalle, E., action of diazonium salts on 6-hydroxy-2:5-dimethylpyrazine. III., A., 197. Gastaldi, C., and Talu, Q., Rung, Behrend, and Pinner's reaction.

II., A., 196.

Gaster. See Böeseken, J.

Gasverarbeitungsges. m.b.H., methods of drying gases or gas mixtures for the synthesis of ammonia, (P.), B., 321.

Gates-Warren, A. I., Gates-Warren, E. L., and Precious Metal Industries, Ltd., coating non-conducting substances with metals, (P.), B., 24.

Gates-Warren, E. L. See Gates-Warren, A. I.

Gatewood, E. See Johnson, T. B.

Gathmann, E., method of making ingot moulds, (P.), B., 780. Gathmys Research Corporation. See Madorsky, S. L.

Gatti, D. See Angeletti, A. Gatty, O. See Lattey, R. T.

Gaubert, P., structure of crystals of heulandite, A., 16.

optical properties of some artificial minerals, A., 121. action of heat and loss of water on the optical properties of

heulandite, A., 122.

Gaudin, A. M., influence of hydrogen-ion concentration on recovery in simple flotation systems, B., 212.

Gaudin, A. M., Gross, John, and Zimmerley, S. R., so-called Kick law applied to fine grinding, B., 927.

Gauger, A. IV., and Salley, D. J., influence of inorganic materials in lignite carbonisation, B., 230.

Gauger, A. W., Storch, H. H., and Burnham Chemical Co., production of sodium carbonate sulphate, (P.), B., 206.

Gault, H. See Soc. des Usines Chim. Rhône-Poulenc.

Gaunt, J. A., triplets of helium, A., 363.

relativistic theory of an atom with many electrons, A., 738.

Gaunt, R. See Bleachers' Assoc., Ltd.

Gaus, W., and Griessbach, R., iodine question in agriculture, B.,

Gaus, W. See also I. G. Farbenind. A.-G.

Gautier, C., increase of hepatic proteins with a diet rich in proteins,

Gavesan, A. S., and Venkateswaran, S., Raman effect in carbon disulphide, A., 976.

Gaviola, E., power relation of the intensities of the lines in the optical excitation of mercury, A., 226.

influence of foreign gases on the optical excitation of mercury, A., 226.

officiency of quenching collisions and the radius of the excited mercury atom, A., 486, 1358.

time-lags in fluorescence and in the Kerr and Faraday effects, A., 979.

Gaviola, E., and Wood, R. W., photosensitised band fluorescence of OH, HgH, NH, H<sub>2</sub>O, and NH<sub>3</sub> molecules, A., 239.

Gavrila, J., and Sparchez, T., action of alcohol on blood-sugar, A., 96.

Gavrilov, A. A. See Andreiev, P.

Gavrilov, N.J., and Evslina, B. B., tobacco. I. Water in tobacco,

Gavrilov, N. J., and Koperina, A., tobacco. II. Protein complexes in tobacco, A., 1499.

Gavrilov, N. J., and Taranova, A., tobacco. III. Determination of protein in tobacco, A., 1499.

Gavrilov, N. M., Mel, S. K., and Mel, P. K., oxidation of iron in water by the action of oxygen and carbon dioxide, B., 210.

Gawel, A., chemical and mineralogical composition of red and green eccene schistous clay of the Eastern Carpathians, A., 420. Gay, L., distillation and rectification of complex mixtures, B., 927.

Gayler, M. L. V., and Preston, G. D., age-hardening of some aluminium alloys, B., 327.

Gaza, C. See Waser, E. Geake, A. Sco Birtwell, C.

Gearin & Sons, Ltd., M., and Cullen, J. R., rendering and digesting subjects containing fats and separating the products, (P.), B., 988.

Gebauer, K., cadmium acetylides, A., 38. Gebauer, R. See Traubenberg, H. R. von.

Gebauer-Fülnegg, E., and Glückmann, A., a-naphtholsulphonic

acids, A., 1440.

Gebauer-Fülnegg, E., Stevens, W. H., and Krug, E., sulphuric esters of carbohydrates, A., 51.

Gebauer-Fülnegg, E. See also Pollak, J.

Gebhard, K., Hanemann, H., and Schrader, A., martensite [ironcarbon] system, B., 685. Gebhardt, H., production of acetylene and apparatus therefor,

(P.), B., 746.

Geddings, E. N. See Eddy, C. O.

Gedroiz, K. K., adsorbing soil complex and adsorbed cations as a basis for genetic classification of soils, B., 1025.

Gee, A. H. Soo Speak, H. B. Geel, W. C. van, intensities of "forbidden" lines in a magnetic field, A., 3.

Geel, W. C. van, and Eymers, (Miss) J. G., double refraction of stretched rubber, A., 764.

Geer, P. L. See Amsler-Morton Co.

Geer, W. C., Winkelmann, H. A., and Goodrich Co., B. F., heat-

plastic derivative of rubber, (P.), B., 052. Geffcken, W., dependence of equivalent refraction of strong electrolytes in solution on concentration. XI. Addition to "refractometric experiments" of Fajans and co-workers, A., 1233.

Geffcken, IV., and Kohner, H., measurement of refraction of solutions, A., 258.

Hehe & Co. Aktien-Gesellschaft. Seo Hesse, E.

Gehlhoff, G., relations between physical characteristics of glasses and their working properties on machines, B., 245.

Gehlhoff, G., Kalsing, H., Litzow, K., and Thomas, M., characteristics of refractory clays for the glass industry, B., 245.

Gehman, S. D., reflexion of soft X-rays, A., 383. Gehman, S. D., and Bazzoni, C. B., reflexion of soft X-rays from aluminium, A., 1355.

Gehman, S. D., and Weatherby, B. B., measurements of conductivities by means of oscillating circuits, A., 512.

Gehrig, W. F., and Essex Specialty Co., Inc., detonating firework composition, (P.), B., 912.

Gehring, A., degree of saturation of soils with lime and potash, B., 335.

changes in some physical properties of soils brought about by lime, B., 569.

Gehring, A., and Wehrmann, O., significance of the degree of saturation of soils with potash in evaluating their potash requirement, B., 335.

Gehrke, M., and Willrath, H. H., equilibria between hydroxy-acids and their anhydro-derivatives, A., 1009.

conductivity titration of solutions of the sodium salts of the lower fatty acids, A., 1424.

Gehrke, M. Sec also Chem. Fabr. auf Aktien (vorm. E. Schering). Geiger, E., and Kropf, H., influence of food on regulation of bloodsugar, A., 467.

Geiger, E., and Schmidt, Eugene, influence of adrenaline on formation of sugar. II. Mobilisation of muscle-glycogen by adrenaline, A., 1201. Geiger, E. See also Staudinger, H.

Geiger, H., and Müller, Walther, electron counting tube, A., 114, 1123.

Geigy Aktien-Gesellschaft, J. R., manufacture of preparations of leuco-compounds of vat dyes, (P.), B., 124.

preparations convertible into dispersions and their manufacture, (P.), B., 316. manufacture of disperse systems, (P.), B., 343.

manufacture of dyes of the phenonaphthasafranine series, (P.), B., 674. Geigy A.-G., J. R. See also Agthe, C. A., and Geigy, Soc. Anon.,

J. R.

Geigy, Société Anonyme, J. R. (Geigy, A.-G., J. R.), tanning substances, (P.), B., 1025.

Geigy, Société Anonyme, J. R. See also Läuger, P., Müller, Hermann, Oswald, L., and Schäfer, J.

Geiling, E. M. K., Britton, S. W., and Calvery, H. O., modification of insulin action in medulli-adrenal-inactivated cats by postpituitary extracts, A., 959. Geiling, E. M. K. See also Jensen, H.

Geipert, R., modern illuminating gas production consequent on the Krummhübl calorific value agreement, B., 502. method and apparatus for testing coal, (P.), B. 771\*.

Geisel, E., manufacture of compound glass, (P.), B., 645. Geisel, K., fluxes for welding, (P.), B., 726.

Geisel, K., and Aluminum Solder Corporation, soldering composition, (P.), B., 781.
Gelber, E. T., and Böeseken, J., determination of iodine values.

II. Action of iodine chloride on fatty acids with conjugated double linkings, B., 364.

Gelder, J. P. van, rotary beater-type disintegrating and shredding mills, (P.), B., 2.

Gelfand, S., food product and method of making same, (P.), B., 376.

Gelfau, S., electrical conductivity of protoplasm, A., 208.

Geller, A., [apparatus for] experimental structure analysis, A.,

Geller, L. W., and National Aniline & Chemical Co., Inc., [production of monoazo-dyes from pyrazolones and anilinepolysulphonic acids, (P.), B., 512.

Geller, L. W., and National Aniline & Chemical Co., Inc., [production of monoazo-dyes from disulphonaphthylpyrazolones and o-aminophenols, (P.), B., 512.

disazopyrazolono colouring matters [chrome wool dyes] which contain a 1:5-dihydroxynaphthalene nucleus, (P.), B., 772.

Gellhern, E., permeability of animal membranes towards dyes, A., 1195.

Gellhorn, E., and Gellhorn, H., effect of secretions and vegetable poisons on the permeability of animal membranes, A., 1195. influence of temperature on the permeability of animal membranes, A., 1195.

Gellhorn, H. See Gellhorn, E. Geloso, J. See Wurmser, R. Geloso, M., and Dubois, P., reduction of permanganate by manganous salts, A., 1156.

Geloso, M., and Levy, (Mlle.) L. S., influence of ammonia on the adsorption of copper or nickel salts, A., 1001.

Gemmill, R., Brackett, R., and McCrosky, C. R., confirmatory test for aluminium, A., 670.

Genaud. See Boutiron.

Genaud, P., interchange of ions between yeast-cells and ammonium chloride solutions, A., 849.

exchange of ions between yeast-cells and solutions of lead nitrate, A., 1492.

General Air Filters Corporation, apparatus for filtering gases, (P.), B., 80.

General Alloys Co. See Van Stone, E. P.
General Aniline Works, Inc. See Ballauf, F., Bergdolt, A.,
Christ, W., Eichwede, H., Grimmel, H., Hentrich, W., Herz, R., Herzberg, W., Höpker, J., Hoffa, E., Kränzlein, G., Lüttringhaus, A., Meyer, Oswald, Nawiasky, P., Polikier, H., Rabe, P., Rath, J., Schirmacher, K., Schmelzer, A., Tschunker, E., Wagner, Hermann, and Zitscher, A.

General Carbonalpha Co., manufacture of hydrocarbons and substances containing adsorbed hydrocarbons, (P.), B., 197.

General Chemical Co. See Adamson, G. P., Benjamin, C. S., Egleson, J. E., Isenbery, H. O. C., Levermore, C. L., Melendy, J. C., Merriam, H. F., Mullen, E. J., Thompson, A. P., and Wellman, N. T.

General-Direktion der Oesterr. Tabakrégie, reducing the nicotine content of raw tobaccos, semi-manufactured and finished

tobacco products, (P.), B., 623.

General Electric Co., and Averrett, A. E., brazing alloy, (P.), B.,

General Electric Co., and Barber, N. E., refrigerating apparatus, (P.), B., 344.

General Electric Co., and Bosch, F. J. G. van den, manufacture of gas-filled electric incandescence lamps, (P.), B., 101.

General Electric Co., Bosch, F. J. G. van den, and Campbell, N. R., [filling for] gas-filled electric incandescence lamps, (P.), B., 331. General Electric Co., and Campbell, N. R., manufacture of photo-electric cells, (P.), B., 362, 440, 824.

photo-electric cell systems, (P.), B., 783.

General Electric Co., and Davey, W. P., coating materials; [water japans], (P.), B., 827\*

coating compositions, (P.), B., 863\*.

General Electric Co., and Devers, P. K., electric furnace, (P.), B.,

General Electric Co., and Gillette, R. T., brazing alloys, (P.), В., 439.

General Electric Co., Goldsmith, L. D., and Jackson, J. F., manufacture of metal powders [iron and nickel] from metal carbonyls, (P.), B., 59.

General Electric Co., Hegel, G. W., and Brophy, G. R., carburisation of metals, (P.), B., 176.

General Electric Co., Henkel, E., and Wolff, Hans, incandescence [electric] lamp, (P.), B., 62.

General Electric Co., Ipsen, C. L., and Otis, A. N., electric furnace, (P.), B., 782.

General Electric Co., and Irby, W., [arc] electrode, (P.), B., 824. General Electric Co., and Jacoby, R., manufacture of drawn tungsten wires, (P.), B., 823\*.

General Electric Co., and Kelley, F. C., treatment of metals [iron], (P.), B., 856.

General Electric Co., and Kelsey, C. A., centrifugal extractor, (P.), B., 79.

General Electric Co., and Kingdon, K. H., electrical discharge device, (P.), B., 859.

General Electric Co., and Kinnard, I. F., temperature-responsive magnetio material, (P.), B., 400.

General Electric Co., and Krämer, C., mercury rectifier, (P.), B., 252. General Electric Co., and Mackay, G. M. J., thermionic electrode, (P.), B., 859.

General Electric Co., Otis, A. N., and Ipsen, C. L., electric furnace, (P.), B., 177.

General Electric Co., and Patent-Treuhand Gesellschaft für Elektrische Glühlampen m.b.H., manufacture of light-diffusing glass, (P.), B., 55. protection of articles made of brass and like alloys against

discoloration, (P.), B., 100.

protection from oxidation of caps consisting of brass or similar alloys, such as bronze, for electric incandescence lamps, etc., (P.), B., 178.

manufacture [ageing] of electric incandescence lamps, (P.), B., 217.

manufacture of solid bodies of high density [from refractory materials], (P.), B., 395.

General Electric Co., and Phelan, J. J., brazing flux, (P.), B., 649. General Electric Co., and Pochobradsky, B., pulverising machinery, (P.), B., 306.

General Electric Co., and Ruder, W. E., heat-resisting metallic material, (P.), B., 479.

General Electric Co., and Sanderson, R. W. W., manufacture of nickel-iron alloys, (P.), B., 604.

General Electric Co., and Schröter, K., hard-metal composition, (P.), B., 781\*.

making tools from hard-metal alloys produced by sintering, (P.), B., 900\*.

General Electric Co., and Singleton, W., coating metals [with silicon], (P.), B., 480.

General Electric Co., Singleton, W., and Marris, G. C., manufacture of cores for electromagnets, etc., (P.), B., 606.

General Electric Co., and Skaupy, F., filament for incandescence lamps, etc., (P.), B., 291\*.

electric discharge tube, (P.), B., 563.

General Electric Co., Skaupy, F., Nachod, H., and Gaidies, G., [readily fusible] vitreous [enamel] composition, (P.), B., 474\*. General Electric Co., and Smithells, C. J., manufacture of filament supports [for electric incandescence lamps], (P.), B., 1021\*.

General Electric Co., and Steele, W. R., heat-resistant composition suitable for are deflectors, (P.), B., 719.

General Electric Co., and Thomson, E., electrolytic apparatus and method of operation, (P.), B., 290.

General Electric Co., and Van Brunt, C., oil-reclaiming process, (P.), B., 885.

General Electric Co., and Woollatt, G. S., pulverulent fuel burners, (P.), B., 771.

General Engineering Co. (Radeliffe), Ltd., and Taylor, S., impregnating [in vacuo] insulating dielectric materials [with oil], (P.), B., 689.

General Foods Co., and Birdseye, C., freezing of food substances, (P.), B., 737.

General Motors Corporation. See Midgley, T., jun.

General Motors Research Corporation. See Boegehold, A. L., Hochwalt, C. A., and Williams, H. M.

General Petroleum Corporation of California. See Olsen, G. F. General Plate Co. See Davignon, V. D.

General Reduction Corporation. See Smith, W. H.

General Refractories Co. See Heuer, R. P., and Trostel, L. J. General Rubber Co. See Rose, R. P., and Teague, M. C

General Zeolite Co., production of base-exchange materials, (P.), B., 642.

Genes, S. See Abderhalden, E.

Genese, D., and Orem, W. H., treatment of paper, (P.), B., 51. Genevois, L., variations in the intensity of respiration and fermentation in the tissues of peas, A., 853. Genke, T. A. See Rakuzin, M. A.

Gennaro, U., and Rossi, G., preparation of fibres or cellulose from graminaceous or other plants of high siliceous content, (P.), B., 202.

Gensecke, W., apparatus for distillation of fatty acids, glycerin, etc., (P.), B., 565\*.

Genter, A. L., and Genter Thickener Co., continuous-filter thickening apparatus, (P.), B., 664.

Genter Thickener Co. See Genter, A. L.

Gentile, G., and Majorana, E., doubling of X-ray and optical terms through electronic rotation, and the intensity of the cæsium lines, A., 487. Georg, A., attempted transformation of a- into  $\beta$ -penta-acetyl-

glucose, A., 543.

George, A., manufacture of calcium hypochlorite, (P.), B., 718. George, A., and Taylor, M. C., manufacture of calcium hypochlorite, (P.), B., 718.

See also MacMullin, R. B., and Mathieson Alkali George, A. Works, Inc.

George, E. See Schmitz, E.

George, H., manufacture of glass, (P.), B., 979. George, W. F. C. See Hall, J. A.

George, W. H., interpretation of X-ray crystal photographs. I. Use of photographic grids, A., 381.

X-ray examination of insulin, edestin, and hamoglobins, A., 988.

interpretation of X-ray crystal photographs. II. Complete rotation photographs, A., 1366.

Georgescu, A. See Ionescu, M. V., and Rådulescn, D. Georgeson, W., thermionic emission through double layers, A., 618. Georgi, C. D. V., piqui-a fruit oils, B., 784. oil content of Malayan estate copra, B., 1022.

Georgi, C. D. V., and Teik, G. L., oil from Hydnocarpus anthel-mintica, B., 784.

Georgievski, A. N., recalculation of the densities of water-alcohol mixtures from the experimental data of Mendeléev, B., 1029. Georgievski, S. I. See Andreiev, S. V.

Gerard, F. W. See Randall, M.

Gerard, R. W., and Wallen, J., nerve mctabolism. V. Phosphates,

Gerard, R. W. See also Holmes, E. G. Gerasimov, A. F., preparation of colloidal bismuth and arsenic soluble in water, A., 760.

collargol, B., 659.

Gerasimov, A. F., and Urshumski, A. S., influence of dilution on the coagulation of certain colloids, A., 1007.

Gerasimov, A. F. See also Aleiev, A. E., and Vozdvischenski, G. S. Gerasimov, Y. T., preparation of ammonium dichromate, A., 897.

Gerber, A. B. See Booth, C. F. Gerber, L. See Englis, D. T. Gerding, H. See Smits, A.

Gerecs, A. See Zemplén, G.

Gericke, H. K. See Wilhelmj, A.

Gericke, S., porous filter crucibles, A., 418. utilisation of phosphates by rye seedlings in different soils,

phosphate and lime contents of Oldenburg soils, B., 370.

Gericke, S. See also Wilhelmj, A.

Gerlach, H., Warnecke, and Blanckenhorn, F., "poupin" system [for the lixiviation and crystallisation of caliche, etc.], B., 596. Gerlach, M., evaluation of the root-soluble soil nutrients phosphorio acid and potassium, B., 143.

effects of different nitrogenous fertilisers, B., 297.

Gerlach, M., and Seidel, C., cold- and hot-fermented manure, B.,

effect of nitrogen in increasing yield [of plants], B., 616.

Gerlach, O., Ostman, N., and Matthiessen & Hegeler Zine Co., reducing the cadmium content of zinc ore, (P.), B., 61.

Gerlach, W., breadth of the spectral lines of the Raman scattered radiation of benzene, A., 241.

spectro-analytical investigation of the dissolution of alloys and the Tammann resistance layer. VI., A., 524.

problem of magnetism, A., 1224. Gerlach, W., and Little, N., dependence of the susceptibilities of glasses on temperature, A., 249.

Gerlach, W., and Schweitzer, E., quantitative emission spectrum analysis, A., 782.

spectroscopic detection of lead in gold-copper-silver alloys, A., 1031.

spectro-analytical method for the rapid determination of iridium, rhodium, and palladium in platinum, A., 1033.

Germain, F., and Dolter, H., production of butyrone [dipropyl ketone], (P.), B., 315.

Germain, R. A., treatment of skins of animals containing calcified formations, (P.), B., 865\*. German, E. See Antropoff, A. von.

German Commission on analytical methods in the fat industry, Wizöff report, B., 564.

German Committee on impurities in brass, first report; influence of aluminium, lead, iron, and zinc in brass, B., 752.

Germann, F. E. E., reactions of the third order, A., 33.
Germann, F. E. E., and Muench, O. B., physical and chemical properties of the platinocyanides. I. Hydrates of lithium platinocyanide, A., 527.

Germann, F. E. E., and Shen, D., photography. I. Nature of sensitivity and latent image, A., 893.

Germer, E. See N.V. Internat. Octrooiburean, and Senitleben, H. Germer, L. H., application of electron diffraction to the investigation of gas adsorption, A., 620.

Germer, L.H. See also Davisson, C.J.

Germuth, F. G., dimethyl-a-naphthylamine for determination of nitrite ion, A., 414. pyridine as catalyst in production of dimethyl-a-naphthylamine,

A., 804. Germuth, F. G., and Mitchell, C., detection and identification of

specific cations with sodium alizarinsulphonate, A., 286. Gerngross, O., glue testing. II. Report of the Commission of

the German Association for testing technical materials, B., 615.

glue and gelatin, B., 991.

Gerngross, O., and Maier-Bode, H., differentiation of skin- and bone-glue with the aid of sulphosalicylic acid precipitation, and the applicability of the sulphosalicylic acid test in the testing of glutin preparations, B., 653.

Gero, W. B., and Westinghouse Lamp Co., seal for hard glass, (P.), B., 56.

electrode material, (P.), B., 481.

manufacture of annealed thorium, (P.), B., 945.

manufacture of electron-emitting material, (P.), B., 1021. Gerö, A. See Müller, Adolf.

Gerö, S., oil of Asarum Europeum, B., 797.

Gerry, H. T., brine circulator for cooling condensers, A., 418. Gersdorff, C. E. F. See Jones, D. B. Gershon, V. P. See Grosvenor, W. M.

Gerstenberg, A., and Bignm, H. J. J., cooling of margarine emul-

sions, (P.), B., 483. Gerstley, J. R., Wang, C. C., Boyden, R. E., and Wood, A. A., influence of feeding on certain acids in the fæces of infants. I. Comparison of effects of human and modified cow's milk on the excretion of volatile acids, A., 1330.

Gerthsen, C., laws of scattering of canal-rays in their passage through solid bodies, A., 234.

Gertler, S. I. See Jamieson, G. S. Gerwe, E. G. See Fry, H. S.

Geschwindovna, O. Sec Dziewoński, K.

Gesell, R., regulation of respiration. XX. Quinhydrone electrode for determination of hydrogen-ion concentration, A.,

regulation of respiration. XXVIII. Lymph acidity and lymph flow during administration of sodium hydrogen carbonate and carbon dioxide. XXIX. Lymph acidity and lymph flow during impaired oxidations produced by cyanide, A.,

Gesell, R., and Hertzmann, A. B., regulation of respiration.

Sodium cyanide and  $p_{\rm H}$  of cerebrospinal fluid, A., 205. regulation of respiration. XXII. Alveolar oxygen and  $p_{\rm H}$  of cerebrospinal fluid. XXIII. Hæmorrhage and pn of cerebrospinal fluid, A., 205.

regulation of respiration. XXIV. Mechanical asphyxia and  $p_{\rm H}$  of cerebrospinal fluid, A., 205.

Gesellschaft für Förderanlagen E. Heckel m.b.H., [mould for] producing [wheel] castings, (P.), B., 480.

Gesellschaft für Industriegasverwertung m.b.H., production of compressed gases from liquefied gases, (P.), B., 460.

insulation of vessels for storing liquefied gases; adsorption of gases in liquid gas apparatus; drying gases in air-liquefying and gas-separation plant, (P.), B., 460.

apparatus for preparing compressed gases, (P.), B., 500.

liquefying and supplying gases, (P.), B., 501. re-gasification of liquefied gases, (P.), B., 501.

conveying and consuming without loss liquid gases such as liquid air, liquid oxygen, liquid nitrogen, etc., boiling at low temperatures, (P.), B., 544. preparation and consumption of compressed gases, (P.), B., 741.

Gesellschaft für Industriegasverwertung m.b.H., and Heylandt, C. W. P., accumulating, conveying, and consuming liquefield gases of low b. p. without loss, (P.), B., 501.

Gesellschaft für Licht-, Wasser-, & Heizanlagen m.b.H., apparatus for purifying crude salts by recrystallisation, (P.), B., 116.

Gesellschaft für Linde's Eismaschinen Aktien-Gesellschaft, lubricants for low-temperature expansion machines in which benzol is separated from coke-oven gases, (P.), B., 198. separation by intense cooling of gaseous mixtures containing

acetylene, (P.), B., 273.

Gesellschaft für Linde's Eismaschinen Aktien-Gesellschaft, extraction of ammonia from gases, more particularly from cokeoven gas, (P.), B., 313.

decomposition of coke-oven gas by cooling to low temperatures,

(P.), B., 424.

removing readily absorbed gases, more particularly carbon dioxide and hydrogen sulphide, from gas mixtures by absorption in water under pressure, (P.), B., 668.

decomposition of gas mixtures, more particularly coke-oven gas, (P.), B., 933.

Gesellschaft für Linde's Eismaschinen Aktien-Gesellschaft, and Société Anonyme Métallurgique de Sambre & Moselle, separation of benzene and similar hydrocarbons from coke-oven and like gas by compression and cooling, (P.), B., 160.

Gesellschaft für Linde's Eismaschinen Aktien-Gesellschaft. Sec

also Soc. Anon. Métallurg. de Sambre & Moselle.

Gesellschaft für Lupinen-Ind. m.b.H., working-up of vegetable waste, (P.), B., 232.

Gesellschaft für Teerverwertung m.b.H. See Spilker, A. L. H. Gesenius, H., metabolic effects of mitogenetic rays, A., 1340.

Gessman, W., and Shalders, E. W., production of low-boiling hydrocarbons, (P.), B., 9.

Gessner, H., setting of cement. I., II., and III., B., 56, 173, 247.

Gessner, O., amphibian poisons, A., 1480.
Gessner, O., and Siebert, K., hypoglycamic action of Phaseolus preparations, A., 96.

Getman, F.H., colour of iodine solutions, A., 135. Gevaert Photo-Producten, Naamlooze Vennootschap, developers

for photographic purposes, (P.), B., 1033.

Gevers-Orban, E., and Pieters, J., carbonisation of briquettes or like agglomerate blocks of fuel, B., 932.

Gewerskschaft der Steinkohlenzeche Mont-Cenis, purifying hydrogen and gases containing hydrogen, (P.), B., 171.

Geyer, A., manufacture of aluminium alloys, (P.), B., 100.

Gfeller, E., preservation of butter, (P.), B., 338.
Gfeller, H., and Schaefer, K., preparation of hydrogen sulphide, A., 1253.

Ghadiali, D. O., electric thermometer, (P.), B., 901.

Ghatak, N., and Dutt, S., colour on basis of molecular strain. V. Absorption spectra and dissociation constants of organic salts of violuric acid, A., 330.

fluoresceins and rhodamines of mixed type, A., 1077.

Gherardini, G., probable significance of the intestinal fermentations in certain morbid conditions, A., 594.

Ghigi, E. See Plancher, G.

Ghosh, B. See Sen, R. N.

Ghosh, B. N., interaction of acids and neutral salts with stannic oxide and its relation to electrical charge, A., 30.

action of sodium hydroxide on stannic acid sol. I. and II., A., 1380.

effect of proteins on the coagulation of bentonite suspensions by electrolytes, A., 1382.

Ghosh, B. N., and Stamberger, P., electrokinetic potential of rubber, B., 484.

Ghosh, J. C., kinetics of photosynthesis in plants; theoretical interpretation of Harder's results on the assimilation of carbon dioxide by Fontinalis, A., 611.

mechanism of photochemical changes occurring in a fluorescing

electrolyte, Å., 894.

Ghosh, J. C., and Mukherjee, J., photochemical reaction between dextrose and hydrogen peroxide in acid medium with tungstic

acid sol as photocatalyst. I., A., 777.

Ghosh, J. C., and Rangacharya, T. L. K., extinction coefficients of mixtures of mercuric chloride and organic acids in the ultraviolet as experimental evidence of the formation of unstable intermediate compounds. III., A., 135.

Ghosh, M. G. See Neogi, P. Ghosh, P. N., electric moment of primary alcohols, A., 380.

Ghosh, P. N., and Chatterjee, B. D., high-frequency discharge in organic vapours, A., 1364.

Ghosh, P. N., and Mahanti, P. C., Raman effect in carbon dioxide, A., 976.

Raman effect in gases and liquids, A., 976.

heterodyne null method of measuring dielectric constant, A., 980. molecular structure of triatomic gases, A., 1219.

Ghosh, P. N., Mahanti, P. C., and Gupta, D. N. S., electric moment of ethylene chloride and ethylidene chloride, A., 867.

Ghosh, P. N., Mahanti, P. C., and Mukherjee, B. C., dielectric constants and molecular structure of carbon disniphide and nitrous oxide, A., 1365.

Ghosh, P. N., Mukherjee, B. C., and Mahanti, P. C., band spectrum of magnesium oxide, A., 1126.

Ghosh, S., determination of antimony in organic antimony compounds, A., 1188.

Ghosh, S., Banerjee, S. N., and Dhar, N. R., coagulation of gelatin

sols in alcohol-water mixture, A., 1007.
Ghosh, S., Chatterjee, N. R., and Dutta, A., examination of roots and leaves of Saussurea Lappa, Clarke. I., A., 1348.

Ghosh, S., Chopra, R. N., and Chatterjee, N. R., [preparation of] urea-stibamine, B., 834.

Ghosh, S., and Dhar, N. R., colloidal behaviour of antimony pentoxide, A., 505.

Ghosh, S. See also Bhatia, L. S., and Dhar, N. R.

Ghosh, S. B. See Sen, H. K.

Ghosh, T. N., and Guha, P. C., lengthened o-di-derivatives of benzene and their ring closure; formation of polymembered heterocyclic compounds from substituted phenylenecarbamides, A., 943.

lengthened o-di-derivatives of benzene and their ring closuro; formation of polymembered heterocyclic compounds from

substituted phenylenedicarbamides, A., 1464.

Ghosh, T. N. See also Guha, P. C.

Giacomini, E., presence, distribution, and mode of excretion of the thyroid secretion in experimental hyperthyroidism, and corresponding observations on adrenaline and other hormones, A., 1343.

Giammona, A., nature of the sugars in liquorice root (Glycyrrhiza glabra), A., 856. Giammona, A. See also Grassi-Cristaldi, D. Giani, A. See Seidal, F.

Giauque, W. F., isotope effect in spectra and precise atomic

weights, A., 1124.
Giauque, W. F., and Johnston, H. L., symmetrical and asymmetrical hydrogen and the third law of thermodynamics; thermal equilibrium and the triple point pressure, A., 138.

isotope of oxygen, mass 18, A., 369.

isotope of oxygen of mass 17 in the earth's atmosphere, A., 736. isotope of oxygen, mass 18; interpretation of the atmospheric absorption bands, A., 736.

heat capacity of oxygen from 12° Abs. to its b. p. and its heat of vaporisation; entropy from spectroscopic data, A.,

Giauque, W. F., and Wiebe, R., heat capacity of hydrogen iodide from 15° Abs. to its b. p. and its heat of vaporisation; entropy from spectroscopic data, A., 755.

Gibb, J. A., and Petroleum Derivatives, Inc., condenser, (P.),

B., 1035.

Gibbons, W. A. See Bradley, C. E.

Gibbs, H. D., Hall, W. L., and Clark, W. M., oxidation-reduction. XIII. Indophenols used as oxidation-reduction indicators, A., 816.

Gibbs, O. S., effects of drugs on secretion of uric acid in the fowl, A., 349.

distribution of quinine in the blood, A., 468.

accurate drop recorder, A., 1415. Gibbs, R. C., and Shapiro, C. V., absorption spectra of phthaleins of trihydric phenols, A., 977. absorption spectra of halogenated fluoresceins, A., 977.

Gibbs, R. C., and Vieweg, (Miss) A. M., extension of the Cd 1-like isoelectronic sequence to Sb IV and Te v, A., 1118. Gibbs, R. C., Vieweg, (Miss) A. M., and Gartlein, C. W., use of

series inductance in vacuum spark spectra, A., 1121.

Gibbs, R. C., and White, H. E., multiplets in the spectra of V III,

multiplets in the spectra of Cr III and Mn III, A., 3.

relations between doublets of stripped atoms in five periods of the periodic table, A., 373.

doublets and quadruplets of doubly-ionised silver, Ag III, A.,

Gibbs, R. C., White, H. E., and Ruedy, J. E., hyperfine structure in spectral lines, especially those of singly-ionised praseodym-

ium, A., 1207.
Gibbs, R. C. See also Shapiro, C. V.
Gibbs, C. W., Tanner, C. C., and Masson, L., pressures of gaseous

mixtures. II. Helium and hydrogen, and their intermolecular forces, A., 253.

Gibert, S. See Rothery, F. Giberton, A. See Violle, P. L.

Gibrat, R., variation with direction of the capillary constant of smeotic substances, A., 253.

Gibson, C. S., Hariharan, K. V., and Simonsen, J. L., derivatives of methyl 2:2-dimethylcyclopentan-3-one-1-carboxylate, A.,

Gibson, C. S., and Johnson, J. D. A., nitration of o-bromoacet-

anilide, A., 57.

10-ohloro-5:10-dihydrophenarsazine and its derivatives. VII. Synthesis of the 1-methyl and 3-methyl homologues, A., 710. 10-chloro-5:10-dihydrophonarsazine and its derivatives. IX. Synthesis of nitromethyldiphonylamine-6'-arsinic acids and their conversion into nitromethyl derivatives of 10-chloro-5:10-dihydrophenarsazine; constitution of 10-chloro-5:10dihydrophenarsazine, A., 945.

10-chloro-5:10-dihydrophenarsazine and its derivatives. X. 1- and 3-Methyl derivatives; condensation of arsenious

chloride and phenyl-m-tolylamine, A., 1090.

substances of phenarsazine type containing the acenaphtheno nucleus, A., 1090.

Gibson, C. S., Johnson, J. D. A., and Levin, B., tryparsamide

type. I. Resolution of N-phenylalanine-4-arsinic acid and of its amide, A., 584.

Gibson, C. S., and Simonsen, J. L., Indian turpentine from Pinus longifolia, Roxb. V. Oxidation of d-∆3 careno with Beckmann's chromic acid mixturo, A., 449. oxidation of d- $\Delta^4$ -careno with Beckmann's chromic acid mix-

ture, A., 819.

constitution of Guareschi's cyano-butadiene acids; attempt to synthesise  $\beta$ -isopropylglutaconie acid, A., 824. Gibson, C. S. See also Elson, L. A., and Johnson, R. N.

Gibson, G. C., Driscoll, J. O., and Jones, W. J., equilibrium between alcohols and salts. III., A., 1012.

Gibson, G. E., and Rice, O. K., diffuse bands and predissociation of iodine monochloride, A., 375.

Gibson, K. S. Seo Priest, I. G.

Gibson, R. E. See Adams, L. H., and Kracek, F. C. Gibson, R. O. See Michels, A.

Gibson, V. L., dehydrator [for crude oil, etc.], (P.), B., 971.

Gibson, W. See Imperial Chemical Industries, Ltd. Gicklhorn, J., preparation of micro-electrodes for measurement of potential, A., 858.

relations of dielectric constants to physiology, A., 858. Giebenhain, H. See Magnus, A. Giedroye, M. See Malachowski, R.

Giertz-Hedström, S., hydraulic moduli and resistance limits of cement, B., 558.

Glese, H. See Schwarz, R.

Gieseeke, F. See Blanck, E. Gieseler, K. See Dolch, M., and Vorländer, D.

Giesen, W. R. B., recovery of precious metals from ores, (P.),

Giesy, P. M., and Arzoomanian, S., extrusive plastometer, A., 534. Giffen, F. J. See Kenrick, F. B.

Gilardi, P. See Kleiber, E. Gilbe, H. F. See Garner, W. E.

Gilbert, B. E., nitrates in soil and plant as indexes of the nitrogen need of a growing crop, B., 757.
Gilbert, B. E. See also McLean, F. T.

Gilbert, E. C., hydrazine: solubility relations of hydrazine picrate, and the equilibrium N2H5+NH3 = NH4+N2H4, A., 1011

rate of oxidation of hydrazine by ferricyanide, A., 1017.

autoxidation of hydrazine, A., 1395.
Gilbert, F. L., and Lowry, T. M., valency. XI. Molecular conductivities and extinction coefficients of derivatives of cyclotelluropentane, A., 10.

valency. XII. Isomeric derivatives of diethyl telluride, A.,

Gilbert, F. L. See also Lowry, T. M.

Gilbert, H., aluminium-welding rod, (P.), B., 1019.

Gilbert, H. N., and Roessler & Hasslacher Chemical Co., manufacture of carbonaceous material, (P.), B., 548\*.

Gilbert, L. F., and Levi, (Miss) M., boric acids, A., 491.

Gilbert, W., thermometer, pyrometers, and the like [for hot-air furnace gases, etc.], (P.), B., 1000.

Gilchrist, W. A., apparatus for mixing, (P.), B., 928.

Gilchrist & Co. See Shafor, R. W.

Gilchrist & Co. See Shafor, R. W.

Giles, D. J., and Latrobe Electric Steel Co., ingot mould, (P.), B., 399.

Gilkey, H. J., tensile autogenous heating of Portland cement mixtures, B., 941.

Gilkey, W. A. See Parks, G. S.

Gill, A. H., and Ma, Y. M., hydrogenation of soya-bean oil; application as lard substitutes, B., 137.

Gill, C. S., damping-down and restarting of blast furnaces, B., 817.

Gill. G. M., developments in gasworks' carbonising plant, with special reference to refractory materials, B., 382.

Gill, J. P., and Vanadium Alloy Steel Co., alloy steel, (P.), B., 922. Gillam, A. E., and Morton, R. A., deterioration of quartz mercuryvapour lamps and the luminescence of fused quartz, A., 240. absorption spectra of halogens and interhalogen compounds in

solution in carbon tetrachloride, A., 977.

Gillan, J. See Campbell, Achnach, & Co., Ltd.

Giller, T., and Ohrt, P., conversion of smelts [molten blast-furnace slag] into foaming highly porous masses, (P.), B., 1018.

Gilles, J., structure of the third-order spectrum of sulphur (S III) A., 225.

3d trajectory in the ionised atoms P II, S III, S III, and Cl III; Cl III quadruplets, A., 617.

ultra-violet bands of sulphur, A., 866.

Gillespie, L. J., equation of state for ethylene, A., 498.

expansion of gases on mixing, especially at very low pressures, I. Its relation to the empirical calculation of the fugacities in gaseous mixtures, A., 1138.

Gillet, A., and Guirchfeld, D., chemical equilibrium in autoxid-

ation, A., 1397.

Gillet, A. See also Dufraisse, C.

Gillett, H. W., possible use of beryllium in aircraft construction, B., 944.

Gillette, R. T. See Gen. Electric Co.

Gillis, J., oxidation-reduction indicators, A., 413.

Gillis, J., and Cuvelier, V., diphenylamine as oxidation-reduction indicator for indirect titration of cobalt, A., 416.

Gillot, P., seeds of Euphorbia paralias, L., A., 855.
Gilman, E., and Johnson, T. B., mesoxalates from nitrogen tetroxide and esters of malonic acid, A., 171.

Gilman, H., and Adams, C. E., di-p-tolylketen, A., 700.

Gilman, H., and Balassa, L., lead diaryldialkyl compounds, A.,

Gilman, H., Beaber, N. J., and Jones, H. L., Grignard reagents from p-dibromobenzene, A., 926.

Gilman, H., and Brown, R. E., mercury dialkyls from organomagnesium halides, A., 687. Gilman, H., and Flick, F. B., tetra-p-tolylethylene, A., 688. Gilman, H., and Fothergill, R. E., side reactions in the preparation

of magnesium alkyl halides, A., 179. constitution and dissociation of the Grignard reagent, A., 1432.

Gilman, H., Fothergill, R. E., and Parker, H. H., reaction between carboxylic halides and organomagnesium halides, A., 1066.

Gilman, H., and Heck, L. L., qualitative colour test for reactive organometallic compounds, A., 303. active magnesium-copper alloys for the preparation of Grignard

reagents, A., 801.

sterio hindrance and the Grignard reaction; colour reactions of organometallic compounds, A., 922.

Gilman, H., and Jones, H. L., possible interchange of radicals on heating a mixture of R'X and R. MgX compounds, A., 1286.

Gilman, H., and King., W. B., determination of tin in organic compounds, A., 713.

Gilman, H., and Kirby, J. E., reaction between organomagnesium halides and some salts, A., 304.

formation of di-p-tolyl in preparation of magnesium benzyl chloride; preliminary formation of free radicals in preparation of Grignard reagents, A., 801.

Gilman, H., Kirby, J. E., and Kinney, C. R., forced reaction of phenylcarbimide, phenylthiocarbimide, and benzophenomeanil with magnesium phenyl bromide: unusual type of as-addition,

Gilman, H., and Leermakers, J. A., forced reaction between some

hydrocarbons and organomagnesium halides, A., 801. Gilman, H., and McCracken, R., aromatic nitro-compounds and organomagnesium halides, A., 546.

Gilman, H., and McGlumphy, J. H., preparation of magnesium allyl bromide, A., 304.

Gilman, H., and Peterson, J. M., organomagnesium halides, A. 433.

Gilman, H., and Robinson, J. D., reaction between magnesium phenyl bromide and alkyl esters of acids of fifth group of elements, A., 545.

reaction between esters and magnesium phenyl bromide; mobility of alkyl groups in esters, A., 1286.

Gilman, H., and Robinson, J. D., preparation of lead triphenyl chloride and lead diphenyl dichloride, A., 1472.

Gilman, H., St. John, E. L., and St. John, N. B., organomagnesium halides, A., 919.

Gilman, H., and St. John, N. B., preparation of  $\beta$ -naphthoic acid from magnesium  $\beta$ -naphthyl bromide, A., 1068.

Gilman, H., Sweeney, O. R., and Kirby, J. E., lead aryl-alkyl compounds, A., 1092.

Gilman, H., and Vanderwal, R. J., factors affecting starting of

Grignard reagents, A., 303.

reaction of a mixture of methyl chloride and bromide with magnesium in ether, A., 537.

relative reactivities of organic halides; relative rate of formation of Grignard reagents, A., 920.

optimum concentration of the organic halide for initiating some Grignard reactions, A., 1286.

Gilman, H., Vanderwal, R. J., and Brown, F. E., influence of pressure on the formation of Grignard reagents, A., 920.

Gilman, H., and Vernon, C. C., reaction between magnesium phenyl bromide and some amides of sulphonic, sulphinic, and sulphenic acids, A., 1170.

Gilman, H., and Wright, G. F., preparation of some perfumes and flavouring extracts from furfuraldehyde and its derivatives; esters of  $\beta$ -furylacrylic acid, B., 997.

Gilman, H., and Zoellner, E. A., factors influencing yields of magnesium tert.-butyl and tert.-amyl chlorides, and preparation of acids from them and carbon dioxide, A., 179.

Gilman, H., Zoellner, E. A., and Dickey, J. B., yields of Grignard reagents. I. Alternating properties of nalkyl bromides. II. Effect of rapid addition of halide on yield, A., 800.

Gilman, H. See also Roos, A. T. Gilmore, R. E., Rosewarne, P. V., and Swinnerton, A. A., Canadian shale oil, and bitumen from bituminous sands, as sources of gasoline and fuel oil by pressure cracking, B., 42.

Gilmore, R. E., and Swinnerton, A. A., Pritchard process for distillation of oil shale, B., 43.

Gilmore, V. J., and De Laval Separator Co., centrifugal-separator feeding device, (P.), B., 307. Gilson, E. G. See Brit. Thomson-Houston Co., Ltd.

Gimeno, A. See González, F. Ginbayashi, Y. See Katagishi, H.

Gindraux, L., chloronitrotolucnes, A., 1433. Ginneken, P. J. H. van. See Aten, A. H. W.

Ginsbach, F., and Horst, H., treatment [de-watering] of peat, (P.), B., 43.

Ginsberg, B. See Harkins, W. D. Ginsberg, H., [with Holder, G.], determination of sulphate in fluorides especially in cryolite, A., 528.

Ginsberg, I., automatic control in chemical industries, B., 541. Ginsburg, J. M., comparison between complete and incomplete digestion of sprayed apple foliage in determining arsenic by the Gutzeit method, B., 300.

correlation between oil sprays and chlorophyll content of foliage, B., 831.

Ginzberg, A. S., and Eschmann, M. S., structure of terpin hydrate,

Giordani, F., and Intonti, R., influence of current density in the electrolytic preparation of sodium perborate, A., 275.

Giordani, F., and Matthias, E., kinetics of the decomposition of solutions of sodium hypochlorite, A., 271.

Giordani, M., solutions of quinine in ethylurethane. II., B., 112. Giordano, I., De Vecchis' process for extracting sugar from beet, B., 572.

Giorgi, F. See Ferrari, A.

Giral, J., unification of methods for determination of iodine value, B., 564.

Girard, P., Petit, F., and Charbonneau, A., destructive distillation [of solid fuels], (P.), B., 504. obtaining light hydrocarbons from solid or liquid fuels, (P.),

B., 669.

Girardet, L. F. C., [gyratory] fore-hearths for cupola furnaces, (P.), B., 400.

Girg, F. See Gummi & Balatawerke Matador A.-G.

Girndt, O., locus of action of antipyretics (quinine and similar compounds), A., 601.

Girod, G., possible decomposition of 5-iodo-, 5-bromo-, 5-ehloro-, and 3:5-dibromo-salieylic acids in the animal organism, A., 956. Giron, E., syrup or molasses from beet, (P.), B., 144.

Giroud, A., protoplasm and glutathione, A., 208.

Giroud, A., and Bulliard, H., glutathione and keratin, A., 590.

Girsewald, C. von, manufacture of aluminium oxide from aluminium sulphide, (P.), B., 557\*

Girsewald, C. von, Siegens, H., Marschner, M., and Metallges. Akt.-Ges., disintegrated alumina, (P.), B., 394\*

Girsewald, C. von. See also Metallbank & Metallurgische Ges. A.-G.

Girzejowski, J., analysis of light gasolines, B., 118.

Gittinger, G. S. See Munch, J. C. Giustiniani, J. See Laillet, C

Givens, M. H. See Hill, C. B.Gjaldbaek, J. K., buffer antiseptics. I. General. II. Phenolactivity, -capacity, and buffer effect, A., 602. buffer antiseptics. III. Silver ion buffers, A., 846.

Gjerstad, T., condensation of zinc and cadmium vapours, (P.), B., 134.

Gladding, E. K. See Du Pont Rayon Co.

Glaeser, W., and Glaeser Research Corporation, production of mercury, (P.), B., 480\*.

Glaeser Research Corporation. See Glaeser, IV.

Glagolev, E. See Nametkin, S. S.

Glascote Co. See Heinsohn, E. I.

Glaser, A., diamagnetic anomaly (observed) of gases, A., 628. anomaly in the diamagnetism of gases. IV. Oxygen addition, A., 982.

Glaser, E. [with Schneck, M.], 7-hydroxy-6-methoxycoumarin and its glucoside, A., 73.

Glaser, E., and Halberstam, A., determination of fats in drugs, B., 957.

Glaser, E., and Halpern, G., activation of insulin by yeast juice, A., 725.

composition of insulin and its relation to enzymes and activators. A., 1495. Glaser, E., and Kleberger, effect of manuring on the quality of

potatoes, B., 993. Glaser, J. See Barr, D. P.

Glasgow, H., mercury salts as soil insecticides, B., 831.

Glasgow, J. G. See Henderson, H. Glass, J. V. S., and Hinshelwood, C. N., unimolecular decomposition of some ethers in the gaseous state, A., 1148.

homogeneous catalysis of a gaseous reaction; kinetics of the catalytic decomposition of isopropyl ether, A., 1150.

Glass, S. W. See Kraus, C. A.

Glassmann, B., and Barsutzkaja, S., volumetric method of determining tin in conserves and other foodstuffs, B., 146.

Glassmann, B, and Posdeev, A, chemical detection of vitamin-C, B., 575.

Glassmann, B., and Zwilling, A., colorimetric resorcinol-hydrochloric acid micro-method of blood-sugar determination, A.,

Glasstone, S., electrolytic polarisation. VII. Complex cyanides: (a) silver. VIII. Complex cyanides: (b) copper, A., 654.

Glasstone, S., and Sanigar, E. B., electrodeposition of silver from argentocyanide solutions, B., 1018. Glatzel, G. See Simon, F.

Glatzel, H., action of various proteins on blood-sugar [in diabetes], A., 1100.

metabolism in diabetics, A., 1482.

Glatzel, H. See also Enderlen, E. Glaubitz, M., pickling of frozen potatoes, B., 338.

Glaubitz, M. See also Haehn, H., and Staiger.

Glauner, R., velocity of dissolution of copper, A., 1018. Glauner, R. See also Simon, A.

Gleason, A. H., and Dougherty, G., dehydration of o-benzoylbenzoic acid, A., 318.

Gleason, P. R., reflecting power of some substances in the extreme ultra-violet, A., 967.
Gleitenberg, E. See Schmelzer, A.
Glen Mixer Co., Inc. See Dehuff, W. F.

Glessner, C. E., smelting apparatus, (P.), B., 23.

Gleu, K., and Roell, E., action of ozone on alkali azides; pernitrous acid. I., A., 523.

Gley, P., extraction of the hormone of the corpora lutea, A., 102. Glimm, E., and Isenbruch, J., determination of small amounts of iodine [in blood], A., 838.

Glimm, E., and Wadehn, F., lipoid-soluble and insoluble forms

of the ovarian hormone, A., 725.

Glinin, G. K., mutual displacement of benzoic acid and salicylic acid from their compounds with m-phenylenediamine, A., 397. Glinka, R., aëration process for drying, carbonisation, and oxidation plants, and apparatus therefor, (P.), B., 307, 628\*.

Glinka-Tschernorutzky, H., nitrogen exchange in Bacillus mycoides. I. Influence of medium on growth and nitrogen exchange. II. Proteolytic enzymes, A., 608.
Gliwitzky, W., measurement of excitation and ionisation potentials by the diffusion method, A., 618.

Glocker, R., regularity of the physical and chemical action of X-rays, A., 276. Glocker, R. See also Dehlinger, U.

Glockler, G., efficiency of electron impact leading to resonance in helium, A., 369. Glockler, G. See also Lind, S. C.

Glömme, H., soil of the forest areas of E. Norway and the Trondhjem district, B., 756.

Gloess, P., process for obtaining organic iodine, (P.), B., 719.

Glover, C. H., [combustion apparatus for] furnaces, (P.), B., 193. Glover, T.J., production of cancer toxin and antitoxin, (P.), B., 340. Glover & Co., Ltd., W. T. See Beaver, C.J.

Glückmann, A. See Gebauer-Fülnegg, E.

Glücksmann, E., production of salts of halogen-substituted aliphatic tetra[-alkyl]ammonium bases, (P.), B., 709.

Glumac, V., theoretical basis of the kinetic theory of gases, A., 991. Gluud, W., and Löpmann, B., manufacture of sodium bicarbonate

and ammonium chloride, (P.), B., 718.
Gluud, W., Otto, K. V., and Ritter, H., formation of a carbide, Fe<sub>2</sub>C, by reduction of iron oxide with carbon monoxide at a lower temperature, A., 1409.

Gnadinger, C. B., and Corl, C. S., pyrethrum flowers. I. Determination of active principles, B., 996.

Gnessin, J., determination of arsenic by Smith's method, A., 668. Gobert, S., determination of caffeine in tea, B., 110.

Godard, J. S., concentration of ores of Western Quebec, B., 819.

Godard, J. S. See also Parsons, C. S.
Godbole, S. N., Paranjne, D. R., and Shrikhande, J. G., constituents of Casalpinia bonducellu nut (Flem). I. Bonducella nut oil, A., 961.

Godbout, A. P. See McNally, J. G.

Godchot, M., and Cauquil, (Mlle.), methylation of cycloheptanone, A., 560.

Goddard, V. R., and Mendel, L. B., plant hæmagglutinins; the

navy bean, A., 858.

Godel, A., and Société de Recherches & d'Exploitations Pétrolifères, separation and recovery of gases and vapours by solid absorbents, (P.), B., 628, 1001\*.

Godfrey, A. A. See Linoleum Manuf. Co., Ltd. Godfrey, (Sir) G. C. See Bird & Co.

Godi, E. See Cecchetti, B.

Godney, S. N., condensation of badan extract with p-nitrosodimethylaniline, B., 123.

Godnev, T. N., and Naryschkin, N. A., aa'-dipyrryl-pentadione and butadione, A., 705.

Godonneche, J., toxicity of arsenic; comparative study of injections of solutions of sodium arsenate and of arsenical mineral waters of the Bourboule, A., 846.

Göbel, E. See Schleicher, S.

Goebel, Erich. See Neumann, B.

Goebel, J. B., calculation of heats of dilution of salts, A., 1146. Goebel, W. F. See Heidelberger, M.

Goedecke, F., manufacture of soluble plant extracts, (P.), B., 453,

dietary composition, (P.), B., 834\*.

Gödecke, W. See Fraenkel, W. Goeder, F. P., crystal structure of potassium sulphate, A., 16. Goedewaagen, M. A. J., influence of the nitrate-ion concentration

of nutrient solutions on the growth of summer wheat, A., 728. Göler, (Frl.) von, and Sachs, (Frl.) G., improvement (by heat treatment) of an aluminium alloy in respect of X-ray structure, A., 743.

influence of rolling and recrystallisation on the structure of regular surface-centred metals, A., 1134.

Gömöry, A. See Vuk, M.

Goens, E., elastic constants of unicrystalline aluminium and gold, A., 496.

Goergen, S. M. See Jackson, R. F. Görlich, B. See Bernhaner, K. Goertz, J. See Czezowska, Z.

Goeschke, A. See Soc. of Chem. Ind. in Basle.

Goeters, W., micro-organisms of and reactions occurring in farmyard manure made in different ways, with special reference to H. Krantz' method of preparing synthetic farmyard manure, B., 992.

Goettsch, G., drop test of stability of [fungicide] emulsions, B.,

Goetz, A., photo-electric effect with change of state of the cathode, A., 482, 968\*

Goetz, A., and Hasler, M. F., method of producing long single crystals of metal; factors influencing crystal orientation and perfection, A., 1220.

Götz, F. W. P., and Dobson, G. M. B., height of the ozone in the

upper atmosphere. II., A., 1263. Götz, F. W. P. See also Chalonge, P.

Götze, K. See Weltzien, W.

Goffart, E., slowly-setting hydraulic materials with high initia resistance, (P.), B., 599. Gogati, D. V. See Kothari, D. S.

Gogolev, F., obtaining average samples of oil cake, B., 27. clectrical apparatus for the extraction in the laboratory of fats and oils, B., 529.

Goguel, G., colour problems of coloured potter's clays, B., 776. Gohdes, W., 4-phenyldihydro-2-picolone, A., 1311.

Goiffon, R., uric acid elimination and diuresis, A., 343.

ammonia coefficients of urine, A., 953.

Goig Botella, S., compressibility of carbon monoxide at 0° and various other temperatures, from 50 to 130 atm., A., 993. compressibility of carbon monoxide at 0° above 50 atm., A.,

Goldberg, D. O., and Gurvich, V. L., naphthenic acids from Baku crude oils, B., 85.
Goldberg, I. See Zuverkalov, D.

Goldberg, J. M., and Nekludov, W. N., changes of cholesterol

content of serum in anaphylaxis, A., 840.
Goldberger, J., Wheeler, G. A., Lillie, R. D., and Rogers, L. M., experimental blacktongue and the blacktongue preventive in yeast, A., 476.

Goldberger, S., effect of  $p_{\rm H}$  on striated muscle, A., 1195. Goldblatt, M. W., action of insulin in normal young rabbits, A., 357. insulin and gluconeogenesis, A., 609.

Goldbloom, A. A., influence of active iron oxide ("siderac") on metabolism, A., 96.

Goldfarb, I. See Stadnikov, G. L. Goldfeder, A., behaviour and action of undigestible substances (keratin, kaolin) in the organism of mammals, A., 1103.

Goldfinger, P., generalisation of stereochemistry, A., 867. stability of atomic space configurations, A., 870.

Goldfinger, P. See also Farkas, L., and Kuhn, R. Goldhammer, A. D., initial current in quartz, A., 384.

electrical conductivity of natural and artificial sodium chloride crystals, A., 1225. Goldhammer, H. See Zerner, E.

Golding, H. D., Leicester, F. D., Hirst, H. S., Rowell, S. W., and Imperial Chemical Industries, Ltd., production of acetic acid, (P.), B., 426.

Golding, J., and Deco, Ltd., [dried] milk products, (P.), B., 147. Golding, N. S., proportion of the citrates of milk incorporated in the curd during cheese-making, B., 300. Goldman, F. H. See La Mer, V. K. Goldman, J. B., oxidase in the blood-leucocytes and the stability

of the enzyme in various types of leucocytes, A., 461.

Goldmann, F., explosions with parahydrogen, A., 1394. ignition of intersecting streams of oxygen and combustible gas, A., 1394.

diffusion phenomena at the lower explosion limit of hydrogenoxygen mixtures, A., 1394.

Goldmann, H., treating antimonial ores, (P.), B., 726\*.

Goldsbrough, R. E., and Tevis, H., production of hydrocarbons of low b. p. from oils or from solid fuels, (P.), B., 1006.

Goldschmidt, F. See Tiede, E.

Goldschmidt, H., catalytic activity of hydrogen ions in ethyl alcohol, A., 36.

Goldschmidt, H., Haaland, H., and Melbye, R. S., esterification of formic acid in ethyl alcohol solution, A., 1245.

Goldschmidt, H., and Melbye, R. S., esterification of formio acid in methyl alcohol, A., 1149.

Goldschmidt, H., and Overwien, E., chemical-kinetic and cryoscopic determination of equilibria in p-toluidine solution; aminolysis, A., 1236.

Goldschmidt, R. See Braun, H. Goldschmidt, R. B., and Coulier, S., production of nitrogenised metallic compounds [cyanides, cyanamides, and nitrides] (P.), B., 171.

production of nitrogenised metallic compounds (P.), B., 171.

Goldschmidt, S., and Bader, J., amino-oxidation. XII. Hydrazyls; β-benzoyl-aa-diarylhydrazyls, A., 1173.

Goldschmidt, S., and Kahn, H., fractionation of water-soluble proteins of blood-serum, A., 951.

Goldschmidt, S., and Kinsky, A., proteins. V. Benzoylproteins:

benzoylovalbumin and its hydrolysis, A., 1188.

Goldschmidt, S., and Osthner, L., routine catalytic preparations in an organic course, B., 162. Goldschmidt, S., and Strauss, K., proteins. V. Degradation of

polypeptides by hypobromites, A., 937.

Goldschmidt, V. M., titanium eyanonitride, A., 18, 524. space required by atoms (ions) in crystals and the character of the lithosphere, A., 374.

crystal structure of rhenium, A., 382, 493\*.

crystal structure and chemical constitution, A., 747.

new regularities in the series of the elementary ionio radii, A., 862.

Goldschmidt, V. M. [with Broch, E., and Oftedal, I.], lattice constant of barium telluride, A., 1222.

Goldschmidt, V. M. See also Knudsen, G.

Goldschmidt Aktien-Gesellschaft, T., manufacture of paint, (P.), B., 64.

aluminium alloys, (P.), B., 134.

utilisation of scrap metal, (P.), B., 249.

transformation of olefines into alkylene ehlorohydrins by means of chlorine water, (P.), B., 806.

continuous production of alkylene oxides from alkylene ehlorohydrins, (P.), B., 886.

Goldschmidt Aktien-Gesellschaft, T. See also Sander, W.

Goldsmith, L. D. See Gen. Electric Co., Ltd. Goldsmith, M. M., Falck, W. H., and Goldsmith Bros. Smelting & Refining Co., ruthenium alloy, (P.), B., 945.

Goldsmith Bros. Smelting & Refining Co. See Goldsmith,  $M.\ M.$  Goldstein, B., physiology of the isolated pancreas. I. External secretion, A., 851.

Goldstein, B. See also Bogayevski, A. I. Goldstein, J., and Stephens, W. J., effect of insulin injected directly into the renal artery on the nitrogen and sugar elimination

of the phloridzinised dog, A., 102. Goldstein, L., some difficulties in the spontaneous emission of radiation, A., 117.

Goldstein, L. See also Laporte, M. Goldstein, R. F., constant of mass action, A., 395.

Kleeman's derivation of the law of mass action, A., 881.

Goldzieher, M., interrenin, A., 221. Goldzieher, J. G., generalisation of the third law of thermodynamics, A., 398

Gollmar, H. A., and Koppers Co., gas purification process, (P.), B., 707\*.

Gollmar, H. A. See also Koppers Co. Gollwitzer, F. See Emmert, B.

Gollwitzer-Meier, K., and Steinhausen, W., determination of hydrogen-ion concentration in circulating blood, A., 1095. measurement of  $p_H$  in flowing liquids, A., 1327. Golovtschinskaya, E. S. See Sadikov, V. S.

Golse, J., oxidation of mercuric cyanide by sodium hypobromite; application to the determination of cyanide and exycyanide of mercury, A., 531.

use of potassium iodide for the rapid detection of mercury [ions] in mercuric cyanide, A., 1259.

use of Nessler's reaction for the rapid characterisation of mercury oxycyanido and its detection in mercuric cyanide, A., 1259.

Goluber, B. A. See Bobko, E. V.

Gomberg, M., reducing effect of binary system, MgX2+Mg, on organic compounds in anhydrous solvents, A., 1302.

Gomberg, M., and Bailar, J. C., jun., halogen-substituted aromatic pinacols: formation of ketyl radicals, CR<sub>2</sub>(OMgI)-, A., 1067.

Gomberg, M., and Van Natta, F. J., reduction of aromatic  $a\beta$ -diketones by the binary system magnesium-magnesium iodide (or bromide), A., 1073. Gombinska, F. See Lévy, (Mllc.) J.

Gomez, A. See Martinez, F. Gomolka, H. See Franke, A. Gonell, H. W., air-screening method for determining the graincomposition of powders, B., 267.

influence of sugar on the setting and hardening of Portland cement, B., 1016.

Gonnissen, J. M., manufacture of a leather substitute, (P.), B.,

Gonser, B. W., Haffey, C. W., and American Smelting & Refining Co., lead refining, (P.), B., 900.

Gonyer, F. A. Sco Ross, C. S.

Gonyk, I., molting ladle for materials of low m. p., (P.), B.,

Gonzalez, F., and Gimeno, A., microcolorimetric determination of lactose, A., 798.

Gooch, W. T., and Terry, (Miss) E. M., velocity of saponification of methyl acetate by sodium hydroxide at 25°, A., 1017.
Goodall, A. W., and Lewis, W. C. McC., decomposition of nitroso-

triacctonamine in presence of hydroxyl ion, A., 36.

Goodall, C., [making pressure-tight joints for] drying, impregnating, and similar treatment of timber, (P.), B., 357. drying and otherwise treating timber, (P.), B., 397.

Goodell, A. P., and Tarr, G. W., water-paint, (P.), B., 728. Goodenough, F. W., industrial uses of gas, B., 422. Goodhall, S. N. See Dunlop Rubber Co., Ltd. Goodhue, L. D. See Coles, H. W.

Goodhue, L. D. See Coles, H. W. Goodman, J. B. Sce Krase, N. W.

Goodman, R. M. Seo Jenkins & Co., Ltd., W. J.

Goodrich, F. J., and Lynn, E. V., Oenanthe sermentosa, A., 106. Goodrich, R. J. See Rintelmann, W. L.

Goodrich, W. E., volume changes during the solidification of metals and alloys of low m. p., A., 1373.

Goodrich Co., B. F., making rubber conversion products, (P.), B., 367.

Goodrich Co., B. F., and Fisher, H. L., manufacture of rubber conversion products, (P.), B., 485\*.

Goodrich Co., B. F. See also Fisher, H. L., Geer, W. C., Gray, H.,

and Winkelmann, H. A. Goodspeed, G. E., and Weymouth, A. A., mineral constituents and origin of a certain kaolin deposit near Spokane, Washington, A., 45.
Goodway, N. F. See Barnett, E. de B.
Goodwin, J. J., and Goodwin Laboratories, Inc., germicidal com-

pound, (P.), B., 738.
Goodwin, J. T. See Midgley, C. A.
Goodwin, W., Martin, H., and Salmon, E. S., fungicidal properties

of cortain spray-fluids, B., 732. Goodwin, W., Salmon, E. S., and Ware, W. M., action of certain substances on the zoospores of Pseudoperonospora humuli (Miy et Takah), Wils, A., 477. Goodwin Laboratories, Inc. See Goodwin, J. J.

Goodyear, E. H. Sco Long, C. W.

Goodyear Tire & Rubber Co., and Bruson, H. A., preparation of halide additive products, polymerides, and oxides of rubber, (P.), B., 367.

Goodyear Tire & Rubber Co., and Clifford, A. M., rubber compound and its preservation, (P.), B., 829. manufacture of rubber or rubber-like material, (P.), B., 990.

Goodyear Tire & Rubber Co., and Dinsmore, R. P., manufacture of synthetic rubber, (P.), B., 829.

Goodyear Tire & Rubber Co., and Sebrell, L. B., accelerator of vulcanisation [of rubber], (P.), B., 182

manufacture of rubber compositions, (P.), B., 334. vulcanisation of caoutchouc, (P.), B., 949.

Goodyear Tire & Rubber Co., and Snyder, R. W., vulcanisation of rubber articles, (P.), B., 139.

Goodyear Tire & Rubber Co., and Teppema, J., preservation of rubber, (P.), B., 66.

manufacture of vulcanised rubber, (P.), B., 652, 925.

Goodyear Tire & Rubber Co. See also Clifford, A. M., Dinsmore, R. P., and Kelly, W. J.

Goodyear-Zeppelin Corporation, and Hurttle, K., treatment of outer covers for aircraft, (P.), B., 638.
Goossens, A., determination of refractive indices of materials,

especially of fused mixtures, used in the Becke immersion method, A., 417. Goot, E. van der. See Kolthoff, I. M.

Gootz, R. See Helferich, B.

Goralski, M., and Mitlin, L. vel L., [scorching] process for producing colours and patterns on textile fabrics [without using dyes], (P.), B., 812.
Gordon, A. See Lipman, C. B.
Gordon, A. B. See Stevens, T. S.

Gordon, J., and Wormall, A., relationship between hæmolytic complement of guinea-pig serum and lipase, A., 1191.

Gordon, J. See also Ellingworth, S. Gordon, K., and Imperial Chemical Industries, Ltd., joint manufacture of sulphuric sold and coment, (P.), B., 434.

Gordon, K., and Imperial Chemical Industries, Ltd., production of hydrogen and gases containing hydrogen, (P.), B., 557.

regeneration of washing liquids employed in removing carbon dioxide and other soluble constituents from gases, (P.), B., 706.

apparatus for the hydrogenation of coal, oil, etc., (P.), B., 803. heating hydrogen or carbon monoxide or gases containing these substances under high pressure, (P.), B., 814. production of fertilisers, (P.), B., 832.

Gordon, K. See also Imperial Chem. Industries, Ltd. Gordon, M. B., and Cohn, D. J., cholesterol and lipoid phosphorus of the blood in infancy and childhood, A., 206.

Gordon, N. E. See Krantz, J. C., jun. Gordon, R. B., photosynthetic reaction, A., 1405.

Gordon, S. M., examination of β-amino-α-phenylethyl alcohol sulphate, B., 188.

Gordon, W., calculation of matrices for the hydrogen atom, A., 1209.

Gordon, W., and Minkowski, R., intensities of the Stark effect components of the Balmer series, A., 859.

Gordon & Co., Ltd., J., [fuel supply control for] furnaces, (P.),

Gore, H. C., action of papain on polarisation of gelatin, A., 1490. Gore, V., and Dhar, N. R., change of viscosity of sols and of precipitating concentrations of electrolytes with purity, and change of ratio of precipitating concentrations with temperature of coagulation, A., 1234. Gore, V. See also Dhar, N. R.

Gorgas, A., determination of iodine value of raw rubber, B., 29. Gorini, C., influence of saprophytic and parasitic life on the acidoproteolytic power of pathogenic bacteria, B., 225. Gorniak, K. See Traube, W. Gornitzkaja, E. See Pincussen, L.

Goroncy, C., detection of nitrites in the forensic study of gunshot

wounds, A., 667.
Gorski, J. See Seide, O.
Górski, M., and Koztowska, M., fertiliser requirement of the onion, B., 409.

Gorter, E., and Grendel, F., protein spreading as method for determination of serum-albumin and -globulin, A., 88. spreading of proteins, A., 1141.

Gortner, R. A., Hoffman, W. F., and Sinclair, W. B., proteins. III. Proteins and the lyotropic series, A., 507. peptisation of wheat-flour proteins by inorganic salt solutions,

B., 262.

Gortner, R. A., and Sinclair, W. B., sulphur in proteins. IV. Effect of alkalis on cystine, A., 1284.

Gosch, F. See Zehenter, J.

Gosden, M., Fox, J. T., and Brain, W. R., the cholesterol of the blood-plasma in epilepsy, A., 954. Goshorn, J. H., and Black, C. K., lithopone darkening, B., 443.

Gosio, R., diminution of activity of pathogenic bacteria by potassium tellurite, A., 1494. Gosnell, E. C. See Mathers, F. C.

Goss, P. C., lubricating mixture, (P.), B., 466.

Gosselin, A., and Gosselin, M., constitution and thermochemistry, A., 143.

new chemical theory and its thermodynamical consequences, A., 1130.

Gosselin, M. See Gosselin, A.

Gosselink, J. G. See Vannah, H. P.

Gossels, G., stability of the hysteresis of iron-nickel alloys, A., 1138.

Gossling, B. S. See Stern, T. E.

Gossner, B., structural relation between beryl and cordierite, A., 126.

structural relationships between pyroxene and amphibolite, A., 747.

crystal form of boleite, A., 749.

Gossner, B., and Brückl, K., structural relationships of rhodonite to other silicates, A., 495.

lattice constants of copper sulphate, A., 1221.

Gossner, B., and Kraus, O., composition of apophyllite, A., 1036. Gossner, B., and Mussgnug, F., comparative X-ray examination of lime-soda silicates, A., 18.

comparative X-ray studies of lime-soda silicates. IV. Melilite, gehlenite, sarkolite, and skapotite, A., 19.

systematic arrangement of neptunite and babingtonite, A., 382. structural relations of alkali sulphates, A., 1221.

aenigmatite and its position in the silicate system, A., 1223.

Gossner, B., and Mussgnug, F., thortveitite, A., 1223.

comparative X-ray examination of magnesium silicates, A.,  $12\overline{2}3.$ 

Gosudarstvennaya Torgovaya Importno-Eksportnaya Kontora Gostorg, and Kislitzin, S., manufacture of black colouring matter [from peat], (P.), B., 590.

Gosudarstvennyi Trest Rezinovoi Promyshlennosti (Resinotrest), and Bysov, B. V., preparation of synthetic rubber, (P.), B., 829. Gothan, W., Pietsch, K., and Petraschek, W., characteristics of various kinds of coal, and the nomenclature of brown coals,

B., 82.

Goto, K., sinomenine and disinomenine. VIII. Colour reactions of sinomenine and sinomenol, A., 830.

reduction of disinomenine and  $\psi$ -disinomenine, A., 1089. Goto, K., and Nakamura, T., sinomenine and disinomenine. XIII. Reduction of bromosinomenine, A., 1469.

Goto, K., and Sudzuki, H., bimolecular alkaloids. I. Disinomenine and  $\psi$  disinomenine, A., 944.

sinomenine and disinomenine. X. Synthesis of dimethylsinomenol; sinomenolquinone, A., 1187.

Goto, M., Fukatu, S., Horiguchi, S., and Nagai, T., preparation and mechanical properties of duralumin, B., 647.

Gottsehalk, A., biochemical synthesis of fumaric from pyruvic acid, A., 958.

Gottschalk, A., and Springborn, A., rational insulin therapy based on daily blood-sugar curves, A., 209.

Gottsehalk, A. See also Springborn, A.

Gottschall, G. See Levine, S. Z.

Goubau, R., elementary micro-analysis, A., 42.

Goubeau, J. See Hönigschmid, O.

Goudielock, W. B. See Vickers-Armstrongs, Ltd.

Goudsmit, S. See Back, E. Gough, F. W., [bituminous] waterproof composition, (P.), B., 588. Gough, H. J., and Cox, H. L., behaviour of a single crystal of zinc subjected to alternating torsional stresses, A., 634.

Gould, A. A. See Cowper-Coles, S. O.

Gould, C. E. See Chance Bros. & Co., Ltd.

Gould, R. H., design of sludge digestion tanks, B., 75.

Gould Storage Battery Co., Inc., apparatus for making glass threads or filaments, (P.), B., 284.

making sheets of glass wool or similar vitreous material, (P.),

Gourley, J. H., apparatus for treating and drying coal, cereals, chemical substances, etc., (P.), B., 458. Gourley, M. F. See Sears, H. J.

Goursat, M., dissociation of alkaloid salts (caffeine, colchicine), A., 1237.

Gouzon, B. See Bierry, H.

Governor & Company of Adventurers of England Trading into Hudson's Bay, and Townsend, C., [brine tank] freezing of fish, (P.), B., 1030.

Gowen, J. W. Sec Leavitt, H. W., and Shope, R. E.

Gower, L. H. R., and O'Brien & Partners, Ltd., S., electrolytic deposition of chromium, (P.), B., 858.

Gowshall, B., [closing device for] filter presses for extracting liquids from viscid substances, (P.), B., 4.

Goy, A., and Burow, von, ranges of  $p_{\rm H}$  values [of soils] in water and in potassium chloride solution, B., 830.

Goy, S., lime requirement of soils, B., 183.

Goy, S., Müller, P., and Roos, O., nature of acidity in mineral soils, B., 335.

buffering, acid density, soil zones, and a single-value unit describing soil conditions. IV., B., 787.

relation between the failure of plants and the lime and acid condition of the soil, B., 906.

Gózony, L., Gsell, J., and Hoffenreich, F., titration method for lipase, A., 352 Gózony, L., and Hoffenreich, F., simultaneous determination of

pepsin and lipase in gastric juice, A., 840.

Graaff, R. J. van de, mobility of ions in gases, A., 969.

Graap, E., new methods of analytical control in the manufacture of sulphite-cellulose, B., 676.

Grabar, P., micro-determination of sodium in biological liquids and tissues, A., 614.

Grabbe, C., effect of hydroxyquinoline [on dogs], A., 214.

Gradinescu, A. See Thomas, P.

Gradwohl, R. B. H., hydrogen-ion colorimeter, A., 161.

Grady, C. B., heat exchanger, (P.), B., 77.

Graefe, E., determination of the penetration of asphalts, B., 42. Graen, J. See Herbert, F. K.

Gränacher, C., and Kouniniotis, C., 3-thiol-2-keto-1:2-dihydroquinoline-4-carboxylic acid and some quinolone derivatives, Ã., 195.

Gränacher, C., Wolf, G., and Weidinger, A., alkylation of diketopiperazine and peptides, A., 196.

Grantzdörffer, A., improvement of crude beet juice, (P.), B., 533. Graesser-Monsanto Chemical Works, Ltd., and Hudson, D. P., production of salts of aromatic hydroxyaldehydes [vanillin and bourbonal], (P.), B., 807. separation, isolation, and purification of aromatic hydroxy-

acids, (P.), B., 807.

production of aromatic [hydr]oxyaldehydes, (P.), B., 888. production of 4-hydroxy-3-alkoxybenzaldehydes and derivatives, (P.), B., 888.

Graesser-Monsanto Chemical Works, Ltd. Sco also Maxwell-Lefroy, H.

Graetz, E., digestive enzymes in stomach juices of snails, A.,

Graf, W., Scilla glucosides, A., 601.

Grafe, E., and Meythaler, F., regulation of the production of insulin. III. Action of anhydro-sugars and sugar derivatives, A., 102.

Grafe, V., plant phosphatides. VIII. Phosphatides of yeast,

A., 471.

Grafe, V., and Freund, K., apparatus for filtration and precipitation with subsequent filtration in an atmosphere of nitrogen, A., 613.

plant phosphatides. VII. Escape of proteins and tannins into the dialysate of barley, A., 1498.

Grafflin, L., and Ball Bros. Co., production of paper and paper stock, (P.), B., 204.

Grah, K., [electropplating with chromium, (P.), B., 900. Graham, H. C., and Pearce, J. N., influence of hydrogen-ion concentration and electrolytes on the turbidity, sensitivity, and settling rates of certain pleistocene clays, B., 208.

Graham, J. J., and Skinner, D. G., action of hydrogen on coal,

B., 764.

Graham, J.J. See also Skinner, D.G. Graham, J.J. T. See McDonnell, C.G.

Graham, W. C., filter, (P.), B., 3. Grahn, W. See Roth, C. C. Gram, C. N. J., and Nielsen, O. J., optical activity of insulinmuscle-dextrose-sodium chloride mixtures and hydrogen-ion

concentration, A., 103. Gram, C. N. J., Nielsen, O. J., and Rud, E., optical activity of

cerebrospinal fluids, A., 91.

Gram, C. N. J. See also Lundsgaard, C. Gram, T. See Testrup, N.

Gramenetzki, N., treating heavy oils by acid sludge, B., 504. Gramenicki, N. D., determination of the carburetting properties ef light motor fuels, B., 85.

Gramkee, B. E. See Sunier, A. A.

Granath, L. P., absorption of ultra-violet light by oxygen, water vapour, and quartz, A., 1350. Grandseigne. See Paul.

Granel, F., and Hédon, L., iron in the lungs of mammals and the formation of melanin pigments, A., 713.

Grange, (Mmc.) R. H. See Lumière, A.

Granigg, B., separation of materials of different physical qualities,
(P.), B., 481.
Grant, F. B. See Thierry, E. H.

**Grant,** J., determination of small quantities of antimony in the form of stibine, A., 165.

solubility of antimony in water, A., 639. Grant, R. F., Richards, F. B., Wetherbee, H. E., and Hanna, H. M., leaching process [for copper ores in situ], (P.), B., 60. Grant, R. F. See also Wetherbee, H. E.

Granville, B., manufacture of porous material, (P.), B., 209.

Grard, J., magnesium compounds derived from propargyl acetal, A., 1276.

Grasse, S., sterilisation of double cream, (P.), B., 535.

Grasselli Chemical Co., cadmium plating, (P.), B., 822.

Grasselli Chemical Co., and Boertlein, J. C., sulphur-burning process, (P.), B., 897.

Grasselli Chemical Co., Booge, J. E., and Hanahan, M. L., lithopone composition, (P.), B., 826.

Grasselli Chemical Co., and Buse, O., sulphur-burning apparatus, (P.), B., 598.

Grasselli Chemical Co., and Howald, A. M., wood impregnation, (P.), B., 434.

Grasselli Chemical Co., and Taylor, E. A., purification of watersoluble metal sulphides, (P.), B., 896.

Grasselli Chemical Co., and Westbrook, L. R., manufacture of crystallised non-caking trisodium phosphate [deca]hydrate, (P.), B., 643.

Grasselli Chemical Co., and Wood, C. D., preparation of sodium silicate solution, (P.), B., 814.

Grasselli Chemical Co. See also Buse, O. H.

Grasselli Dyestuff Corporation, Bauer, W., Herre, A., and Funke, A., readily-soluble vat colour preparations, (P.), B., 512\*.

Grasselli Dyestuff Corporation, Berliner, R., Stein, R., and Trautner, W., 1-phenylbenzanthrone compounds; cinnamylideneanthrones; 10-phenylbenzanthrone and its derivatives, (P.), B., 551\*.

vat dye derived from 3-halogenopyrazolanthrone, (P.), B., 591\*. Grasselli Dyestuff Corporation, and Berthold, H., manufacture of

aminoanthraquinones, (P.), B., 237.

Grasselli Dyestuff Corporation, Brode, J., and Johannsen, A., carrying-out catalytic oxidations in the gaseous or vapour state, (P.), B., 47.

Grasselli Dyestuff Corporation, Clingestein, H., and Grimmel, H. W., primary diazo-dyes derived from diaminocarbazoles

and arylimino-compounds, (P.), B., 428.

Grasselli Dyestuff Corporation, Daimler, K., Balle, G., and Just, F. preparation of fulling liquors and emulsions [for softening of wool, etc.], (P.), B., 938\*.

Grasselli Dyestuff Corporation, Duisberg, Hentrich, W., and Zeh, L., monoazo dye, (P.), B., 512\*.

Grasselli Dyestuff Corporation, and Eckert, W., 6-aminoacenaphthene-5-carboxylic acid and its manufacture, (P.), B., 427\*.

Grasselli Dyestuff Corporation, and Eichwede, H., azo-dyes and their preparation, (P.), B., 352\*.

Grasselli Dyestuff Corporation, Eichwede, H., Fischer, Erich, and Müller, C. E., dyeing of cellulose derivatives [esters and ethers], (P.), B., 430\*.

Grasselli Dyestuff Corporation, and Eiflaender, L., production of 1-diazoanthraquinone-2-carboxylic acids, (P.), B., 277\*.

Grasselli Dyestuff Corporation, and Fischer, Erich, preparation of dinitrohalogenaryls [halogenodinitro-benzenesulphonamides and -benzamides], (P.), B., 467\*.

Grasselli Dyestuff Corporation, Fischer, Erich, and Müller, C. E., preparation of [yellow] azo-dyes [for acetate silk], (P.), B., 428\*. Grasselli Dyestuff Corporation, and Greune, H., cyclic ketonic compound and its manufacture, (P.), B., 673\*.

Grasselli Dyestuff Corporation, Guenther, A., Thauss, A., and

Mauthe, G, solution for dyeing purposes, (P.), B., 751\*. Grasselli Dyestuff Corporation, and Haller, J., halides of aromatic oxamic acids, (P.), B., 238\*.

Grasselli Dyestuff Corporation, and Hentrich, W., azo-dyes and cellulose derivatives [acetate silk] dyed therewith, (P.), B., 591. Grasselli Dyestuff Corporation, Hentrich, W., Knoche, R., and

Hardtmann, M., dyeing of artificial silk, (P.), B., 515\*. Grasselli Dyestuff Corporation, and Herz, R., condensation pro-

ducts [thioglycollic acids] from reaction products of sulphur chloride and primary arylamines, (P.), B., 772. Grasselli Dyestuff Corporation, Herz, R., Schulte, F., and Zerweek,

W., conversion of cyanonaphthalenesulphonic acids, (P.), B., 772\*.

Grasselli Dyestuff Corporation, Herz, R., and Zerweck, W., [manufacture of | halogenated dinaphthyldicarboxylic acids, (P.), B., 917\*.

Grasselli Dyestuff Corporation, Heusner, K., and Simon, M., production of [acid] azo-dyes, (P.), B., 351.

Grasselli Dyestuff Corporation, Hoffa, E., Heyna, H., Thoma, E., and Hirschel, O., vat dyes [of the thioindigoid series], (P.), B., 712\*.

Grasselli Dyestuff Corporation, Hoffa, E., and Jörg, P., preparation of aromatic mercaptans, (P.), B., 427\*.

Grasselli Dyestuff Corporation, Hoffa, E., Müller, Jens, and Müller, Fritz, manufacture of 1-methyl-5-chlorobenzene-2-carboxamino-3-thioglycollic acid [5-chloro-2-carbamyl-m-tolylthioglycollic acid], (P.), B., 808.

Grasselli Dyestuff Corporation, Hoffa, E., Thoma, E., and Heyna,

► H., azo-dyes and their manufacture, (P.), B., 936\*.

Grasselli Dyestuff Corporation, Hotz, E., and Lantz, V., preparation of 2-aminonaphthalene-3-carboxylic acid [2-amino-3naphthoic acid], (P.), B., 936\*.

Grasselli Dyestuff Corporation, and Job, A., vat dyes of pyridazineanthraquinone series, (P.), B., 638\*.

Grasselli Dyestuff Corporation, Kalischer, G., and Keller, K., manufacture of o-halogenated aromatic quaternary ammonium compounds, (P.), B., 317\*.

Grasselli Dyestuff Corporation, Kalischer, G., and Müller, Rudolf,

production of vat dyes, (P.), B., 428\*

Grasselli Dyestnff Corporation, Kalischer, G., Scheyer, H., and Keller, K., manufacture of chlorinated aldehydes of the aromatic series, (P.), B., 973\*.

Grasselli Dyestuff Corporation, Kalischer, G., and Zerweck, W.,

manufacture of vat dyes, (P.), B., 891\*.

Grasselli Dyestuff Corporation, Keller, F., and Schnitzspahn, K., diazo-salt preparations for dyeing and printing, (P.), B., 809\*. Grasselli Dyestuff Corporation, and Konrad, R., production of azo-dyes on weighted silk, (P.), B., 809\*.

Grasselli Dyestuff Corporation, Kränzlein, G., and Corell, M., manufacture of dihydro-p-thioazines of the anthraquinone

series, (P.), B., 468\*

condensation products [thiohydrins] of the anthraquinone series [dyes for acetate silk], (P.), B., 712\*

preparation of condensation products of the benzanthrone series,

(P.), B., 936\*.

Grasselli Dyestuff Corporation, Kränzlein, G., and Roemer, F., preparation of monodiazo-compounds of 1:4-diaminoanthraquinone-β-sulphonic acids, (P.), B., 512\*.

Grasselli Dyestuff Corporation, Kränzlein, G., Vollmann, H., Greune, H., and Wolfram, A., benzanthrones substituted in the Bz nucleus and their manufacture, (P.), B., 637\*.

Grasselli Dyestuff Corporation, Kränzlein, G., Zahn, K., Ochwat, P., and Corell, M., derivatives of dibenzpyrenequinone and their preparation, (P.), B., 352\*.

Grasselli Dyestuff Corporation, and Krauss, C., vat dyes of the 2:2'-indole-thionaphthen-indigo series, (P.), B., 352\*.

vat indigoid dyes from dihalogenoalkylisatins, (P.), B., 428\*. Grasselli Dyestuff Corporation, Krech, R., and Keiner, E., polyazodyes derived from tetrazotised halogenated 4:4'diaminodiphenylmethanes, (P.), B., 428\*.

Grasselli Dyestuff Corporation, Krzikalla, H., and Müller, Werner, production of metallic compounds of [azo-]dyes, (P.), B., 428\*. Grasselli Dyestuff Corporation, Laska, L., and Weber, F., manu-

facture of o-hydroxyazo-dyes, (P.), B., 428\*.

monoazo-dyes [for acetate silk] derived from naphthylaminecarboxylic [aminonaphthoic] acids, (P.), B., 937\*.

Grasselli Dyestuff Corporation, and Mayer, F., preparation of phthaloyl-2:3-thionaphthens, (P.), B., 550\*.

Grasselli Dyestuff Corporation, Meyer, K. H., and Krzikalla, H., production of green hydrated chromium oxide, (P.), B., 815\*.

Grasselli Dyestuff Corporation, and Mieg, W., anthraquinone vat dye, (P.), B., 352\*.

manufacture of vat dyes of the anthraquinone series, (P.), B., 428\*.

Grasselli Dyestuff Corporation, Mieg, W., and Job, A., preparation of monoaminodiphthaloylacridones, (P.), B., 124\*.

manufacture of mononitrated diphthaloylacridones, (P.), B.,

Grasselli Dyestuff Corporation, Müller, Joachim, and Schubert, M.,

manufacture of 1:8-naphthoxypenthiophen [perinaphththioindoxyl] compounds, (P.), B., 467\*. Grasselli Dyestuff Corporation, Müller, Wilhelm, and Appenzeller,

E., 4'-halogeno-2-benzoylbenzoic acid intermediates, (P.), B., 427. Grasselli Dyestuff Corporation, and Neresheimer, H., [manufacture

of] vat dye, (P.), B., 352\*.

Grasselli Dyestuff Corporation, Onnertz, P., and Schwärzel, B., protecting animal fibres, (P.), B., 51\*.

Grasselli Dyestuff Corporation, and Pieffer, E., printing with vat dyes mixed with colluloso esters or ethers, (P.), B., 470\*. Grasselli Dyestuff Corporation, Rabe, P., Stötter, H., Wenk, B.,

and Schepss, W., production of dyeings fast to light, (P.), B., 596\*

Grasselli Dyestuff Corporation, Reddelein, G., and Müller, Werner, manufacture of condensation products of the anthraquinone series, (P.), B., 673\*.

Grasselli Dyestuff Corporation, Risse, F., and Fischer, Erich, preserving difficultly-soluble dyestuffs in a state of fine division, (P.), B., 712\*.

Grasselli Dyestuff Corporation, and Scheyer, H., manufacture of

vat dyes of the anthracene series, (P.), B., 467\*.
Grasselli Dyestuff Corporation, Schlrmacher, K., and Renn, K., manufacture of isatins [and N-arylsulphonyl derivatives thereof], (P.), B., 936\*.

Grasselli Dyestuff Corporation, and Schmidlin, R., manufacture of brown dyes suitable for dyeing wool and leather, (P.), B., 552\*

Grasselli Dyestuff Corporation, Schmidt, M. P., and Herrmann, O., isatin derivatives and their manufacture, (P.), B., 936\*.

Grasselli Dyestuff Corporation, Schmidt, M. P., and Limpach, O., vat dyes [of the indigoid series], (P.), B., 772. Grasselli Dyestuff Corporation, Schmidt, M. P., and Neugebauer,

W., manufacture of vat dyes [of the perylenetetracarboxylic di-imide series], (P.), B., 808.

Grasselli Dyestuff Corporation, Schmidt, R. E., and Berliner, R.,

dyes of the anthraquinone series [for acetate silk], (P.), B.,

Grasselli Dyestuff Corporation, Schmidt, R. E., and Trautner, W., a-di(methylamino)-a-dihydroxyanthraquinonedisulphonic acids and their manufacture, (P.), B., 936\*.

Grasselli Dyestuff Corporation, Schumacher, W., and Seib, C., preparation of homogeneous pure 2:3- and 2:5-dichloro-4-amino-1-methylbenzene [2:3- and 2:5-dichloro-p-toluidines], (P.), B.,

Grasselli Dyestuff Corporation, Schumann, Curt, Munch, E., Schlichting, O., and Christ, B., production of aldehyde-sulphoxylates, (P.), B., 936\*.

Grasselli Dyestuff Corporation, Schweitzer, H., and Neelmeier, W., aminodiarylsulphonepyrazolone azo-dyes, (P.), B., 12\*

Grasselli Dyestuff Corporation, Spengler, O., and Weidenhagen, R., brown sulphur dyes, (P.), B., 772.

Grasselli Dyestuff Corporation, and Stein, B., manufacture of tetranitrodianthrone, (P.), B., 512\*.

Grasselli Dyestuff Corporation, Stein, B., Trautner, W., and Berliner, R., manufacture of benzanthrone compounds, (P.), B., 550\*.

Grasselli Dyestuff Corporation, Thauss, A., and Guenther, A., dyeing and printing [of mixed textiles], (P.), B., 751.

Grasselli Dyestuff Corporation, Unger, O., and Böhner, G., [manufacture of] vat dyes of the anthraquinone-acridone series, (P.), B., 936\*.

Grasselli Dyestuff Corporation, Wagner, Hermann, Eichwede, H., and Fischer, Erich, azo-dyes and their manufacture, (P.), B., 591\*

Grasselli Dyestuff Corporation, Wagner, Hermann, and Vossen, B., preparation of yellow monoazo-dyes fast to light, (P.), B., 277\*. Grasselli Dyestuff Corporation, and Weinand, K., [preparation of] dyes of the anthraquinone series, (P.), B., 512.

manufacture of 1:4-diarylamino-5:8-dihydroxyanthraquinone, (P.), B., 550\*.

Grasselli Dyestuff Corporation, and Wilke, K., manufacture of

α-aminoanthraquinone-β-carboxylic acids, (P.), B., 936\*.
 Grasselli Dyestuff Corporation, Wolfram, A., and Greune, H., manufacture of Bz-methylbenzanthrones, (P.), B., 551\*.

Grasselli Dyestuff Corporation, Zahn, K., and Ochwat, P., manufacture of arylaminoanthraquinones, (P.), B., 590\*.

Grasselli Dyestuff Corporation, and Zitscher, A., manufacture of o-aminodiaryl ethers, (P.), B., 512\*.
Grasser, G., synthetic tanning materials. I. Hydroxybenzene

series, B., 950. South Japanese tanning materials, B., 950.

Grasser, G., and Nakanishi, H., tanning action of alcoholic tannin solutions; tanning action of complex chromium salts; effect of inert substances on alkaline swelling, B., 1047

Grasser, G., and Tau, S., tanning materials and their determination, B., 949.

Grassi-Cristaldi, D., and Giammona, A., determination of nitrides in Etna projections, A., 673.

Grassi-Cristaldi, G., and Scafile, F., behaviour of certain zeolites, A., 670.

Grassmann, W., and Dyckerhoff, H., proteinase and polypeptidase

of yeast, A., 100. Grassmann, W., Dyckerhoff, H., and Schoenebeck, O. von, enzymatic fission of proline peptides, A., 848.

Grassmann, W., and Heyde, W., alkalimetric micro-determination of amino-acids and peptides, A., 949.

Grassmann, W. See also Willstätter, R.

Grassner, F. See Lucas, R.

Grather, G., and Nagahama, T., reduction of dichromates to basic chromium salts, A., 1027.

Gratz, O., lipolysis of worked butter several days after preparation,

Graubner, V., production of alkali soaps, including ammonium soap, and obtaining fatty acid therefrom, (P.), B., 1022.

Graubner, W., quantitative spectrographic studies in the ultra-I. Hormones, A., 1213.

Graulich, W., electrometallurgy of gold, B., 58.

Grauss, G., centrifugal drying machine, (P.), B., 875. Gravatt, G. F. See Nelson, R. M.

Gravell, J. H., storage and transportation of acid mixtures in steel drums, (P.), B., 16.

removal of paint and varnish, (P.), B., 404.

pickling of iron and steel, (P.), B., 725. Gravell, J. H., and American Chemical Paint Co., metal cleaning,

(P.), B., 649. Gravell, J. H., and Douty, A., metal pickling, (P.), B., 24.

controlling the action of pickling acids on motals, (P.), B., 604. Gray, C. E., and Turnbow, G. D., manufacture of ice-cream or similar frozen food product, (P.), B., 659.

Gray, C. R. See Hunn, A. E. M.

Gray, D., Bailey, R. O., Murray, W. S., and Oneida Community, Ltd., production of tarnish-resisting silver alloy, etc., (P.), B., 822.

production of tarnish-resisting silver and silver plate, (P.), B., 822, 858.

manufacture of aluminium-plated articles, (P.), B., 858. Gray, E. D., Scofield, E. L., Defoe, E. C., and Standard Oil Co. of California, refining of mineral lubricating oils, (P.), B., 885. Gray, G. W., and Texas Co., lubricating composition, (P.), B.,

cracking of hydrocarbon oils, (P.), B., 883. Gray, G. W. See also Levy, S. I.

746.

Gray, H., and Goodrich Co., B. F., liquid solution of thiocarbanilide, (P.), B., 200.

moulding of ebonite composition, (P.), B., 257. composite product [rubber cement], (P.), B., 446.

bonding of rubber to metal, (P.), B., 531.

Gray, H. H., and Thompson, M. B., influence of nitrogen on the solubility of ferrous materials in hydrochloric acid. II. Effect on the carbon content. III. Further experiments, B., 174.

Gray, H. Le B., and Eastman Kodak Co., manufacture of collulose esters of high uniformity, (P.), B., 892.
Gray, H. Le B., Murray, T. F., jun., and Staud, C. J., effect cf aniline on cellulose triacetate, A., 915.

Gray, H. Le B., Staud, C.J., and Eastman Kodak Co., manufacture of chloroform-soluble cellulose acetate, (P.), B., 554.

Gray, H. Le B. See also Staud, C. J.

Gray, I. E. See Hall, F. G.

Gray, J. A., \gamma-rays of radium, A., 233.

Gray, J. A., and O'Leary, A. J., internal absorption of y-rays, A., 486.

Gray, L. H., absorption of penetrating radiation, A., 372.

Gray Processes Corporation, and Pease, H., refining hydrocarbon distillates, (P.), B., 804.

Gray Processes Corporation. See also Phillips, E. B.

Graymore, J., action of aromatic acid chlorides on vinyldiacetoneamine [2:2:6-trimethyl-4-piperidone], A., 577.

Great Western Electro Chemical Co. See Hirschkind, W.

Greathouse, L. H., and Atmospheric Nitrogen Corporation, production of nitric acid from ammonia, (P.), B., 55\*.

Greaves, J. D. See Carter, E. G.

Greaves, J. E., and Gardner, W., is sulphur a limiting factor of crop production in some Utah soils? B., 757.

Greaves, J. E., and Hirst, C. T., mineral content of grain, A.,

phosphorus of grains, B., 657.

Greaves, J. E., Zobell, C. E., and Greaves, J. D., influence of iodine on the growth and metabolism of yeasts, A., 849.

Greaves, R. H., Abram, H. H., and Rees, S. H., erosion of guns, B., 437.

Grebel, A., [mechanism of] combustion in internal-combustion motors, B., 43.

Grebenschischikov, I, V., and Favorskaia, T. A., electrometric titration of boric acid, A., 1030. Gredt, P., forming briquettes from iron ore concentrates, (P.), B., 780.

Gredt, P. See also Knaff, A.

Green, A. A., and Michaelis, L., permeability of membranes. VIII. Behaviour of dried collodion membrane towards bivalent cations, A., 392.

Green, A. A., Weech, A. A., and Michaelis, L., permeability of membranes. VII. Conductivity of electrolytes within the membrane, A., 392.

Green, A. A. See also Ferry, R. M

Green, A. T., functions of regenerators in relation to the refractory materials of construction, B., 518.

Green, B. M. See Thaysen, A. C. Green, C. H., preservation of eggs, (P.), B., 698.

Green, C. H., Aldrich, M., and Rowntree, L. G., metabolism of the bile. III. Enterohepatic circulation of bile acids, A., 213. Green, C. S. See Christina, V.

Green, E. L., wetting power, A., 876. Green, E. W., Unthank, G. R., and Dunn, D., combustion of

pulverised fuel and means therefor, (P.), B., 704. Green, (Mrs.) G. A., Hodkin, F. W., Parkin, M., and Turner, W. E. S., influence of grain size of batch materials on rate of melting [of glass], B., 472.
Green, (Mrs.) G. A., Hodkin, F. W., and Turner, W. E. S.,

remelting of glasses of abnormal working properties, B., 472. Green, (Mrs.) G. A. See also English, S.

Green, H. See Hatfield, W. H.

Green, H. M. Sec United States Metals Refining Co.

Green, J. B., welding rod, (P.), B., 781. Green, J. B., and Loring, R. A., are spectrum of antimony, A., 1352.

Green, J. E. See Dokkenwadel, F. G. Green, R. G. See Brit. Thomson-Houston Co., Ltd.

Green, S. J. See Brit. Celanese, Ltd.

Green, W. D., and Combined Metals Reduction Co., separation of mixed sulphide ores by flotation, (P.), B., 856.

Green, W. D. See also Snyder, E. H. Greenbaum, F. R., organic salts of telluric acid, A., 53.

attempt to prepare mercury compounds of triphenylmethane dyes, A., 336.

organic additive compounds of calcium chloride and calcium iodide, A., 1169.

Greenbaum, F. R. See also Mulford, H. K. Greenberg, D. M., colorimetric determination of proteins of blood-serum, A., 837.
Greenberg, D. M. See also Gunther, L., and Nasset, E. S.
Greene, B. H., kiln, (P.), B., 209.
Greene, C. H. See Bannick, E. G.
Greene, F. C. Laucks, I. F., and Old Ben Coal Corporation,

apparatus for carbonising coal, etc., (P.), B., 879. Greenhalgh, G. H., and Sweetland, E. J., filter, (P.), B., 801.

Greenleaf, C. A., and Browne, C. A., Fiehe's test [for commercial invert sugar in honey], B., 867.

Greenleaf, R. M., Routt, O. L., and Plastoid Products, Inc., highspeed mixer, (P.), B., 876.

Greensfelder, B. S., and Latimer, W. M., heat capacity and entropy of barium bromate from 16° to 300° Abs.; entropy

of bromate ion, A., 142. Greensfelder, B. S. See also Freundlich, H. Greenstreet, C. J., and Gasoline Corporation, treating hydrocarbon

oils, (P.), B., 770. Greenwald, I., Jaffé's reaction for creatinine. V. Isolation of the red compound, A., 86.

ammonium creatinine picrate, A., 301.

prevention of tetany of parathyroidectomised dogs. III. Ammonium chloride, A., 954.

possible significance of d-xyloketose (urinary pentose) in normal metabolism, A., 1484.

Greenwald, I., and Gross, Joseph, prevention of tetany in parathyroidectomised dogs. I. Cod-liver oil; effect on calcium assimilation. II. Lactose, A., 842.

Greer, E. J., removal of mercaptans from solution by adsorption on metallic sulphides, B., 1008.

Gregg, A. S., rubber tubing, (P.), B., 66. Gregg, J. L., and Küttner, C. W., tungsten carbide alloys, B.,

Gregg, R. C. See Vandaveer, F. E.

Gregg-Wilson, (Miss) N., and Wright, R., selective solvent action. VII. Solubilities in mixed solvents, A., 131.

Gregory, A. W., treatment of ores for recovery of titanium, (P.), B., 1020\*.

Gregory, C. E. See Watson, H. B. Gregory, C. H. See Bradley, A. J.See Watson, H. B.

Gregory, F. G., and Richards, F. J., plant nutrition. I. Effect of manurial deficiency on the respiration and assimilation rate in barley, B., 370.

Gregory, H., and Archer, C. T., thermal conductivities of carbon monoxide and nitrous oxide, A., 21.

Gregory, R., and Pascoe, T. A., colorimetric determination of bile acids, A., 1114.

Gregson, W., waste-heat recovery with particular reference to the carbonising and steel-making industries, B., 764.

Greibach, E. H., vaporisation under the influence of an electric field, A., 755.

Greiner, C., production of solid glue and gelatin in drop- or lens-shape, (P.), B., 30.

Greiner, F., manufacture of strong, machinable cast iron, (P.), B:, 858\*.

Greisen, E. C. Sec Allis-Chalmers Manuf. Co.

Greitemann, G., Wizöff communication; colorimetry of oils and fats, B., 564.

Gremels, H., influence of diuretics on the oxygen consumption of the Starling kidney preparation, A., 601.

Gremels, H. See also Trendelenburg, P. Gremmer, W., scries in the krypton arc spectrum, A., 733.

Grendel, F., lipoid layer of sheep's chromocytes, A., 1477.

Grendel, F. See also Gorter, E. Grenet, G. See Michel-Lévy, A.

Grenquist, E. A., dispersion of "pigments" in rubber. II., B.,

Gressmann, M.L. See Kohner, H.

Greth, A. See Fonrobert, E. Grether, E. F., and Dow Chemical Co., preparation of aminophenol ethers, (P.), B., 807.

Greune, H. See Grasselli Dyestuff Corporation.

Grewe, E., volume displacement of salt-sugar solutions [for dough mixtures], B., 187.

Grewe, E., and Holm, G. E., effect of variation in the method of manufacture on the baking quality of dry skim milk, B., 187.

Grewe, E., Marshall, W. K., and Harrel, C. G., method of measuring colour in bread, B., 262.

Grewe, E. Sce also Whittier, E. O. Grey, E. C., iodometric determination of iron, A., 286.

Grice, C. S. W., and Wheeler, R. V., firedamp explosions within closed vessels: "pressure piling," B., 193.
Griebel, C., and Weiss, F., saffron crocus, B., 89.

microchemical detection of some substances which yield volatile aldehyde or ketone with certain reagents, B., 121.

Griengl, F. See Pongratz, A. Griep, O. E. See Palmaer, W.

Grier, H. E., and Comey Brooklyn Co., R. N., process of dyeing, (P.), B., 774.

Grier, J. A., and Warren, J. A., compression refrigerating appar-

atus, (P.), B., 665. Grier, J. A. See also Van Deventer, H. R.

Grier, W. D., identification of rayon, B., 240.

Gries, H., and Esser, H., single crystals of iron, B., 599. Griessbach, R., Ambros, O., and Winthrop Chemical Co., Inc., valuable products from organised substances, (P.), B., 954.

Griessbach, R. See also Gaus, W., and I. G. Farbenind. A.-G. Griessmeyer, H. See Noack, K.

Griffin, F. C., disposal of septic-tank effluent [at Dacca] by dilution, irrigation, and digestion, B., 75. Griffin, H. C. See Borgstrom, P.

Griffin, H. K., Adams, J. R., and Smith, D. F., rate of burning of individual particles of solid fuel, B., 877.

Griffin, R. C., determination of sulphur in petroleum oils, B.,

Griffith, R. H., evaluation and cracking of gas oils, B., 1038. Griffith, W. H., benzoylated amino-acids in the animal organism. IV. Origin of glycine, A., 843.

Griffiths,  $\vec{E}$ , heat-conduction problems, B., 381.

hygrometer for use in timber-seasoning kilns, B., 598.

heat insulators, B., 913.

Griffiths, E., and Awbery, J. H., measurement of flame temperatures, A., 534.

dependence of the mobility of ions in air on the relative humidity, A., 862.

Griffiths, E., and Griffiths, E. A., penetrometers, (P.), B., 4. Griffiths, E. A. See Griffiths, E.

Griffiths, H., distilling apparatus, (P.), B., 499. Griffiths, H., and Passburg, E., drying and impregnating in vacuo particularly applicable to manufacture of insulating materials, P.), B., 458.

Griffiths, J. G. A. See Norrish, R. G. W. Griffon, H. See Leulier, A.

Grigaut, A., and Boutroux, A., osmomoter for the measurement of the osmotic pressure of colloids, A., 761, 1004\*.

Grigg, P. P. See Chapman, D. L.

Grignard, V., and Tchéoufaki, [conjugated] diacetylenic hydrocarbons, A., 290.

additive properties of diacetylenic hydrocarbons, A., 448, 907, 1163\*.

Grigoriev, A. T., physical properties of platinum, A., 753\*.

alloys of gold and platinum, A., 756\*.

Grigoriev, P. N., and Galkin, P. I., action of sulphuric acid on clay at the ordinary temperature, B., 518.

Grigorieva, A. A. See Tronov, B. V. Grigorojeva, V. F. See Ivanov, N. N.

Grigsby, C. E., effect of typical slags on firebrick with a method of determination correlated to service, B., 473.

Grijns, G., De Haan, K., and Loeff, J. A. van der, diet and reproduction. III., A., 359.

Grille, M. L. Sec Chevrie, F. Grillet, N. B., and Société pour la Fabrication de la Soie "Rhodiaseta," apparatus for manufacture of artificial silk, (P.), B.,

Grillon, (Mlle.) S., analysis of the liquid from a splenic cyst, A., 342, 716\*

Grillon, (Mlle.) S. See also Bridel, M.

Grimbert, L., and Fleury, P., chemical composition of "hist-amine" gastric juice of man. I and II A 500

Grimditch, W. H., and Philadelphia Storage Battery Co., [electric] battery plate, (P.), B., 782.

electrolytic cell and solutions therefor, (P.), B., 824.

Grime, G., and Morris-Jones, W., X-ray investigation of coppermagnesium alloys, A., 868.

Grimes, M., and Doherty, J., lactose-fermenting yeasts isolated

from milk, cream, and butter, B., 926.

Grimes, M. See also Cummins, H. A.

Grimm, H. G., vapour-pressure separation of isotopes by fractional distillation. I. Distillation experiments with carbon tetrachloride, A., 484.

efficiency of fractional distillation apparatus. I. Application of Brown's law to column distillations, A., 533.

Grimm, H. G., and Braun, L., vapour-pressure separation of isotopes by fractional distillation. II. Experiments in the fractionation of chlorine on the large scale, A., 484.

Grimmel, H., Clingestein, H., and General Aniline Works, Inc., [manufacture of water-insoluble] azo-dyes, (P.), B., 974\*.

Grimmel, H. W. See Grasselli Dyestuff Corporation. Grimmer, W., and Benduski, H., physical examination of milk,

B., 735. Grimmer, W., and Hinkelmann, E., action of rennin, B., 300.

Grindley, G. C. See Tyndall, A. M.

Grindley, J., determination of the density of liquids, A., 252. Grindley, J., and Bury, C. R., densities of butyric acid-water mixtures, A., 638.

Grindley, J., and Davies, C. W., calibration of conductivity cells. II. Conductivity of potassium chloride at 25°, A., 511. Grindley & Co., Ltd., and Yeates, R. L., synthetic resins, (P.),

B., 404. Grinfield, R., ionisation potential of the molecule of water, A., 12. Grinwald, E., allelocatalytic substances in cultures of Colpidium colpoda, Ehrbg., A., 849.

Grisehkevitsch-Trochimovski, E., and Sikorski, S. F., optical

properties of arsenic. II., A., 13. Griswold, D. J., Trowbridge, P. F., Hogan, A. G., and Haigh, L. D., effect of gestation and lactation on the growth and composition of swine, A., 719.

Griswold, T., jun., and Dow Chemical Co., apparatus for chemical reaction on heated solid material, (P.), B., 496, 799.

Grivins, J., treatment of fuel-air mixtures for internal-combustion engines, (P.), B., 45.

Groak, B., colorimetric micro-determination of residual nitrogen in blood and serum, A., 1095.

micro-determination of calcium in serum and plasma, A., 1326.

Grodzińska, W., nitrification of urine treated with clay and the loss of free nitrogen which it undergoes, A., 1330.

Groeck, M., operation of the calcium hydroxide process [of water treatment], B., 418. Gröndal, J. G., and Carlson, C. L., apparatus for dry distillation

of bituminous shales, brown coal, and the like, (P.), B., 915.

Grönning, A., filters for liquids, (P.), B., 80.
Groesbeck, E. C., and Tucker, W. A., accelerated laboratory corrosion test methods for zinc-coated steel, B., 22.

Groff, F., and Bakelite Corporation, phenol resin and its manufacture, (P.), B., 444.

Groff, F., Miller, G. W., and Bakelite Corporation, phenolic resin and its manufacture, (P.), B., 826.

Groggins, P. H., amination by ammonolysis [the substitution of the amino-group for other radicals by means of ammonia], B., 549. Groggins, P. H., and Newton, H. P., [preparation of] 2-amino-

anthraquinone from chlorobenzene and phthalic anhydride,

B., 387.

Groll, J. T., influence of amino-acids on the action of ptyalin, A., 216.

Grollman, A., nitrogenous constituents of the urine of the goosefish (Lophius piscatorius); presence of trimethylamine oxide, A., 464.

solubility of gases in blood, A., 836.

Gromann, F., quantitative spectral analysis of solutions, A., 784. Groner, W. T. See Velzy, J. E.

Gronover, A., and Wohnlich, E., lead content of red glazes, B., 719. chemical and physical examination of flesh and flesh fluid of various animals: the Feder ratio, B., 956.

Gronow, W. E. von, protection from corrosion of aluminium

armatures by anodic oxidation, B., 521.

Groombridge, W. H., and Dickinson, Ltd., A. J., manufacture of insecticides, (P.), B., 106.

Groosmuller, J. T. See Lakerman, C.

Groot, J. See Waterman, H. I.

Groschenkov, A. J. See Domontovitsch, M. K.

Gross, E., and Romanova, M., scattering of light in quartz and solid amorphous substances which contain the SiO2 group, A.,

Gross, E. See also Filippov, A. Gross, John. See Gaudin, A. M. Gross, Joseph. See Greenwald, I.

Gross, O., complete gasification of fuels, (P.), B., 841. Gross, P., characteristic regularity in the molecular polarisation

of some pure dipole substances, A., 1128.

Gross, Paul, determination of solubility of slightly soluble liquids in water and the solubilities of the dichloroethanes and dichloro-

propanes, A., 1139. Gross, R. R. See Firestone Tyre & Rubber Co. (1922), Ltd. Grosse, Aristid von, why no hydrogen nuclei are emitted in

radio-active changes, A., 737. Grosse, Arno. Sec Küster, W.

Grosser, F. R., acidification of fabrics, (P.), B., 1013.

Grossfeld, J., and Miermeister, A., occurrence, detection, and determination of lauric acid in alcoholic liquors, B., 145. detection of coconut and palm-kernel oils by testing for lauric acid, B., 363.

Grosskinsky, O. See I. G. Farbenind. A.-G. Grosskopt, W., material and morphological behaviour of ligninrich conifer tissues in the formation of forest humus and

brown coal, B., 741.

Grossman, H., subdividing solid and semi-solid substances [e.g., waxes or resins], (P.), B., 885.

Grossman, H., and Pritchard, W. S., production of oiled pigments, (P.), B., 566.

Grossmann, E. See Lange, H.

Grossmann, M. A. See Langenberg, F. C., and Williams, D. Grossmann, M. M., manufacture of synthetic mineral fibres, (P.),

Grosvenor, W. M., and Gershon, V. P., manufacture of alloys, (P.), B., 604.

Grote, A. See Musag Ges. f. den Bau von Müll- & Schlacken-Verwertungsanlagen, A.-G.

Grote, L., burners for pulverulent fuel and liquid fuel, (P.), B., 466.

Groth, A. H. See Whipple, G. H. Groves, L. G., and Turner, E. E., nitration of 4-chloro-4'-bromobenzophenone and -diphenylsulphone, and attempted nitration of 4-chloro-4'-bromodiphenyl, A., 561

Groves, L. G., Turner, E. E., and Sharp, G. I., scission of diaryl ethers and related compounds by means of piperidine. II. Nitration of 2:4:4'-trichlorodiphenyl ether, and of 2:4-dichlorophenyl p-toluenesulphonate and benzoate, A., 551.

Grube, G., electrodeposition of pure chromium in thick layers (P.), B., 525.

Grube, G. [with Helfer, J., and Luz, G.], electrochemical behaviour of gold and platinum in hydrochloric acid solution, A., 1403.

Grube, G., and Burkhardt, A., electrical conductivity, thermal expansion, and hardness of magnesium-zinc alloys, A., 873. electrical conductivity, corrosion, and age-hardening of cad-mium-zinc alloys, B., 721. Gruber, W., and Wacker Gesellschaft für Electrochemische Industrie, A., preparing acetone-soluble, high-viscosity cellulose acetate, (P.), B., 810.

Grubitsch, H. See Jantsch, G.

Grün, A., quantitative determination of acetone groups, A., 428.

Grünbaum, A. See Snapper, I.

Grüneisen, E., Wiedemann-Franz law, A., 117.

interpretation of the linear isotherms derived from the Wiedemann-Franz-Lorenz law of conductivity, A., 387.

Grünert, E., desulphuration of coal, B., 582.

Grünfeld, O. See Ditmar, R. Grünsteidl, E., microchemical colour reaction for sulphur, A., 899. Grünsteidl, E. See also Stockert, K.

Grüntuch, L. See Naegeli, C

Grüss, H., and Siemens & Halske Akt.-Ges., apparatus for the determination of the amount of carbonic acid in flue gases, (P.), B., 290.

Gruhl, A. See Reihlen, H.

Grumbach, A., and Schlivitch, S., action of atmospheric oxygen on photo-electric cells containing a coloured liquid, A., 1393.

Grundström, B. See Bengtsson,  $\tilde{E}$ 

Grundy, J. G., suitability of various metals and alloys for dyeing machines, B., 243. effect threads, B., 555.

Gruner, E., alkali aluminosilicates. I. Synthetic study of nepheline, A., 1153.

Gruner, J. W., structure of analcime. I. Space-group, A., 748. structure of boracite, A., 749.

Gruse, W. A. See Livingstone, C.J., Marley, S. P., and Souther, B. L. Grutzmann, (Frl.) M., photo-electric behaviour of mercury during the transition from the liquid to the solid state of aggregation, A., 229.

Gruzewska, Z. See Carnot, P., and Rousseu, B. Grynwasser, J. See Turski, J.

Gschöpf, R., colour kinematography, (P.), B., 38. production of natural-colour [photographie] pictures, (P.), B., 624.

Gsell, J. See Gózony, L.

Gsell-Busse, M. A., ostrus-producing hormone in bile, A., 475. Gualdi, A., stereochemical action of animal phosphatase, A., 471. regulated enzymic dismutation by the keto-aldehyde mutase of B. subtilis, A., 472.

Guardabassi, G. See Bianchi, A. E.

Guardian Metals Co. See Coles, H. L., and Donaldson, J. G. Guastalla, J., surface solutions of oleic acid; measurement of very low pressures, A., 1002.

Gubarev, E., hydrogen peroxide as oxidation catalyst in the

determination of nitrogen by Kjeldahl's method, A., 529.

Gubelmann, I., Weiland, H. J., and Stallmann, O., manufacture of 1:3-diamino-2-hydroxyanthraquinone from 4'-hydroxy-obenzoylbenzoic acid, and of the intermediate products, (P.), B., 48\*.

Gubelmann, I. See also Tinker, J. M., and Weiland, H. J. Gubser, P. See De Diesbach, H.

Gucker, F. T., jun. See Richards, T. W. Gudjónsson, S. V. See Fridericia, L. S.

Gülker, F., production of hydrogen, (P.), B., 95\*. Gündel, W. See Pummerer, R. Guenes, S. See Dienersteln, Z. M.

Günther. See Densch.

Guenther, A. See Grasselli Dyestuff Corporation.

Günther, F. See I. G. Farbenind. A.-G. Günther, P., chemical action of X-rays, A., 155. Günther-Schulze, A., anodic relationships of aluminium, A., 1247. Guntzel, R., and Schieferwerke Ausdauer Akt.-Ges., producing a

viscous phenol condensation product, (P.), B., 530 Günzler, H., Neubert, O., and Winthrop Chemical Co., Inc., poly-

hydroxy-[organo-]mercury compound, (P.), B., 32.
Günzler, H., and Winthrop Chemical Co., Inc., manufacture of alkali salts of halogenated amides of aromatic sulphonic acids, (P.), B., 237.

Guerci, L., compounds of lecithin with amino acids, A., 213. Guerin, P., hydrocyanic acid in Lotus, A., 362. Guerithault, B. See Lasausse, E. Guerrant, N. B., and Salmon, W. D., adsorption of quinone, oxalate, and dextrose by fuller's earth and charcoal (norit), A., 133.

Guerrant, N. B. See also Salmon, W. D. Gürsching, M. See Trantz, M. Guertler, W., and Anastasiadis, L., polymorphism of zinc, A., 1370.

Guevara, D. See Clavera, J. M.

Guggenheim, D., Guggenheim, M., Guggenheim, S. R., Guggenheim, S., MacGowan, J. K., and Smith, E. A. C., (Guggenheim Bros.), treatment of tin-bearing materials, (P.), B., 604. Guggenheim, E. A., conceptions of electrical P.D. between two

phases and the individual activities of ions, A., 885.

Guggenheim, M. See Guggenheim, D. Guggenheim, S. See Guggenheim, D. Guggenheim, S. R. See Guggenheim, D.

Guggenheim Bros. Seo Guggenheim, D.

Guglialmelli, L. See Anastasi, C. Guglielmino, S. See Minunni, G.

Guha, B. C., and Drummond, J. C., concentration of vitamin-B, A., 1496.

Guha, P. C., and Banerjee, H. K., bis-semidine inversion in

aromatic dihydrazo-compounds, A., 309.

Guha, P. C., and Chakravarti, T. K., ring closure of hydrazo-monothiodicarbonamides with acetic anhydride; formation of iminothiodiazolones and iminothioltriazoles, A., 582

Guha, P. C., and Dutta, D. N., formation of heterocyclic compounds from diethyl xanthoformate, A., 583.

Guha, P. C., and Ghosh, T. N., o-thiolphenylhydrazine, A., 553. Guha, P. C., and Saletore, S. R. A., formation of heterocyclic compounds from ethyl carbethoxythiocarbamate, A., 1317.

Guha, P. C. See also Ghosh, T. N. Guha-Ray, N. C. See Sircar, A. C.

Guillaumin, C. O., and Vignes, H., composition of the blood and

the menstrual cycle; cholesterol, A., 596.
Guillaumin, C. O., Wahl, R., and Laurencin, M. L., determination of serum-proteins; comparison of results obtained by the gravimetric method and determination of nitrogen and of refractive index, A., 713.

Guillemin, V., jun., and Zener, C., hydrogen-ion wave function, A., 737.

Guillemin, V., jun. See also Kemble, E. C., and Zener, C.

Guillery, R., registering manometer for permanent control, B., 701. Guillet, L., and Ballay, corrosion of aluminium alloys in superheated steam, B., 983.

Guillet, L., Galibourg, J., and Samsoen, M., tensile tests [of steels]

at elevated temperatures, B., 601.

tensile tests [on alloy steels] at elevated temperatures, B., 752. Guillet, L., and Roux, A., annealing of metals in vacuo, B., 286. Guilliermond, coloration of living vegetable cells by neutral-red, A., 611.

Guinet, M., sizing of artificial silk, (P.), B., 596.

Guinot, H., extraction and concentration of acetic acid from dilute aqueous solutions, B., 314.

Guirchfeld, D. See Gillet, A. Guise, B. F. G. See Scriven, H. A.

Gulbransen, R. See Browning, C. H.

Gulezin, C. E. See Müller, J. H.Gulf Refining Co. See Henderson, H., Henry, R. W., McAfee, A. M., Marley, S. P., and Souther, B. L.

Gulik, W. van, and Keesom, W. H., melting curve of hydrogen to 245 kg./cm.2, A., 387.

Gull, A. E., manufacture of artificial silk, (P.), B., 125. manufacture of artificial silk by the dry-spinning method, (P.),

Gull, H. C., and Turner, E. E., orientation effects in the diphenyl series. VII. Effect of substituents in one nucleus on ratio of ortho:para nitration in the other; nitration of 2- and 4-nitroand of 2:4- and 2:4'-dinitro-diphenyl and of diphenyl-4-carboxylic acid, A., 547. Gulland, J. M., Haworth, R. D., Virden, C. J., and Callow, R. K.,

synthetical experiments on the aporphine alkaloids. VII. Attempted syntheses of apomorphine dimethyl ether, A., 1187.

Gulland, J. M., and Peters, R. A., alleged antineuritic properties of certain quinoline and glyoxaline derivatives, A., 1496.

Gulland, J. M., and Virden, C. J., anhydro-compounds derived from 2-nitro-3:4-dimethoxyphenylacetonitrile and certain

pseudo-bases, A., 1182. Gulland, J. M. See also Callow, R. K.

Gummi & Balatawerke Matador Aktien-Gesellschaft, and Girg, F., production of differently coloured marbled, veined, or streaky sponge rubber, (P.), B., 139.

Gunder, A. I., universal stand for electrolysis with rotating

electrode, A., 1262.

Gundermann, E., coagulation of colloids from beet-sugar liquors, B., 533,

Gunka, R., [gas-fired] furnaces, (P.), B., 305.

Gunther, L., and Greenberg, D. M., determination of inorganic phosphate of blood-serum, A., 838.

Guntz, A. A., and Barbier, J., determination of metals as sulphates using silica crucibles, A., 668.

Gupta, D. N. S. See Ghosh, P. N. Gupta, J. C. Seo Chopra, R. N.

Gupta, R. S. See Bhatnagar, S. S.

Gurevitsch, L. See Sokolov, P. I.

Gurgel, L., and De Amorim, T. F., oil from [seeds of] the pao marfim (ivory wood) (Agonandra brasiliensis, Miers), B., 987.

Gurgel, L., and Ramos, F., oil from seeds of the anda-assú (Johanesia princeps, Vell), B., 987.
Gurian, D. See Riesenfeld, E. H.
Gurin, S. See Williams, R. R.

Gurney, R. W., efficiency of ionisation in hydrogen by positive-ion impact at 7000 volts, A., 113.

nuclear levels and artificial disintegration, A., 486.

Gurney, R. W., and Condon, E. U., quantum mechanics and radioactive disintegration, A., 374.
Gurney, R. W., and Morse, P. M., space charge sheaths in positive-

ray analysis, A., 735.

Gurvich, V. L., and Pengu, M. A., cylinder stocks of high quality from lubricating oil residues, B., 769.

Gurvich, V. L. See also Goldberg, D. O., and Shiperovich, V. Gurwitsch, L., and Salkind, S., mitogenetic behaviour of blood from carcinomatous animals, A., 1330.

Guseva, L. P., essential oils of Hyssopus officinalis, B., 660. Gusseva, K. See Rutovski, B. Gustafson, F. G. See Upjohn, L. B. Gustafson, E. G. T., and Cornelius, H. G. E., production of metals in electric furnaces, (P.), B., 59. Gustafsson, E. G. T. See also Flodin, H. G.

Gustin, D. S., and Westinghouse Lamp Co., dry-coating of lamp bulbs, (P.), B., 252. Gustus, E. L. See Jacobs, W. A.

Gutbier, A., and Barfuss-Knochendöppel, H. R., system zinc oxide-water, A., 30. Guthke, F. W. See Vorländer, D.

Guthrie, A. N., and Libman, E. E., partial molal heat capacities and relative partial molal heat functions in solutions of molten metals, A., 1013. Guthrie, F. C., blue rock salt, A., 168.

Guthrie, R. G., Wozasek, O. J., and People's Gas By-Products Corporation, carburisation of iron and steel, (P.), B., 561.

Gutsell, J. S., influence of certain water conditions, especially dissolved gases, on trout, A., 1103.
Gutstein, M., water-soluble phosphatide and the Nadi oxidase

reactions, A., 855.

Guttmann, A., properties and uses of slag wool, B., 211.

prolonged tests on concrete made with various ballasts, espe-

Gutton, H., properties of ionised gases in high-frequency fields, A., 228.

dielectric constant of some ionised gases, A., 742. Gutzeit, G., rapid qualitative analysis. I. Specific and special reactions of the commoner cations and anions, A., 898. rapid qualitative analysis. II. Spot tests for the commoner cations and anions, A., 1254.

Guy, H. L., and Metropolitan-Vickers Electrical Co., Ltd., evapor-

ators, (P.), B., 876.
Guy, W. G., radioactivity of the lighter elements, A., 116.

Guyer, J. A., and Taylor, M. C., manufacture of calcium hypochlorite, (P.), B., 718. Guyer, J. A. See also Mathieson Alkali Works, Inc.

Guyer, M. F., and Lepkovsky, S., immunisation and the nitrogenous constituents of the blood, A., 1478.

Guyot, R., viscous fermentation of lemonade, B., 145.

Guyot, R. See also Meunier, L.

Gwan, O. S. See De Jong, H. G. B. Gwinn, I. T., microphotometer for the study of spectrograms, A., 166,

Gwosdz, J., water-gas from bituminous coal, B., 156.

Gyemant, A., electrical resistance of liquid insulating materials, B., 289.

György, P., and Keller, H., low-carbohydrate feeding, A., 597. kidney metabolism: ammonia and phosphate metabolism, sugar utilisation, A., 1194.

György, P., and Thannhauser, S. J., have histidine and arginine any influence on purine synthesis in the growing human

organism? A., 346.

Gyotoku, K., lipases. I. Organ-lipases and the inhibition of

lipase action by poisons, A., 99.

Gyotoku, K., and Matsubara, S., fat-decomposing enzyme. XII. Activation of lipase by bile, and the relation between the stomach lipase and the activating action of bile, A., 1490. Gyotoku, K., and Terashima, S., lipases. II. Determination of

lipase in duodenal contents. III. Lipases and proteins. IV.

Separation of lipase into two fractions, A., 99.

Gyro Process Corporation. See Ramage, A. S., and Weaver, J. B.

Gyulai, Z., and Hartly, D., electrical conductivity in relation with mechanical stress in rock salt, A., 384.

## Ħ.

Haabestad, E. H., and B.A.S. Co., process of separating liquids [alcohols], (P.), B., 708.

Haabestad, E. H. See also Ayres, E. E., jun.

Haack, E., question of instances of "non-classical" isomerism among designatives of archaecters.

among derivatives of anthracene, A., 1054.

Haack, E. See also Windaus, A. Haag, F. E., decomposition of fats by bacteria, A., 607.

Haag, H. B., and Hatcher, R. A., keeping properties of digitalis and some of its preparations, B., 835.

Haag, H. B. See also Hatcher, R. A. Haaland, H. See Goldschmidt, H., and Lunde, G.

Haar, A. W. van der, action of acetic anhydride on carboxylic acids, A., 909.

saponins and related compounds, A., 1045. Haarmann, W. See Hahn, A.

Haarmann & Reimer Chemische Fabrik zu Holzminden G.m.b.H., and Kerschbaum, M., manufacture of musk-scented lactones, (P.), B., 37.

Haas, A., derivation of the Boltzmann entropy law by means of the conception of material waves, A., 1383.

Haas, A. R. C., and Halma, F. F., chemical relationship between scion and stock in Citrus, A., 1112.

calcium in lemon and orange leaves, B., 408.

Haas, D. See Sherrill, M. L.

Haas, F. See Sigmund, F. Haas, H., drying apparatus for cellulose sheets, etc., (P.), B., 280.

drying of textile fibres or material, (P.), B., 750. Haas, M, and Uno, D, age-hardening of standard silver, B, 359. Haas, P., microchemical determination of the methylimino-group,

A., 337. Haas, P., and Hill, T. G., metabolic products of certain fucoids. I. Sugar. II. Mannitol and mannitan, A., 1498.

Haas, P., and Russell-Wells, B., carrageen (Chrondrus crispus).

IV. The hydrolysis of carrageen mucilage, A., 856.

Haas, R. See Zellstoff-fabr, Waldhof.

Haase, C. See Dahl, O., and Masing, G.

Haase, L. W., determination of copper with 5:7-dibromo-8hydroxyquinoline, A., 1159. chlorination of water. II., B., 341.

Haase, L. W. See also Marsson, V. Haase, M., optical characters of copper halides, A., 754.

Haber, E. S., catalase and oxidase of the tomato as influenced by the soil reaction, A., 961.

Haber, E. S. See also House, M. C., and McLaughlin, L.

Haber, F., rôle of electrical carriers in the explosion of combustible gases mixed with air, A., 771.

heterogeneous catalysis, A., 1399.

Haber, F., and Schweinitz, H. D. von, ignition of detonating gas by hydrogen atoms, A., 278.

Haber, F. See also Bonhoeffer, K. F., and Farkas, L.

Haberkorn, W. F., waterproofing, more especially for wool and silk goods, (P.), B., 679.

Haberlandt, L., heart hormone. IX. Experiments with a heart extract from warm-blooded animals, A., 101. heart hormone. X. Experiments with warm-blooded animals,

A., 475.

heart hormone, A., 1342, 1495. Habgood, B. J. See Smith, W. S.

Habla, A., brick kilns, (P.), B., 558. Habler, C., and Noetzel, B., micro-methods, A., 1500. Hac, R., oxidation of alkali sulphites to dithionates, A., 777. Hac, R., and Netuka, V., mechanism of the catalytic action of molybdic acid on the reduction of nitric acid by ferrous chloride in a hydrochloric acid medium, A., 1398.

Hachihama, Y. See Nishizawa, K. Hacker, P. See Deussen, E. Hackford, J. E., and Hakol, Ltd., oil-gas process, (P.), B., 805\*.

Hackford, J. E. See also Clayton Installations, Ltd. Hackiewicz, B. See Broniewski, W.

Hackl, O., determination of total sulphur in coal, B., 40.

Hackler, H. W. See Ellison, G.

Hackspill, L., some properties of alkali metals, A., 38

Hadamovsky, E., [manufacture of] bleaching powder without cooling, B., 515.

Hadding, A., and Aubel, R. van, [X-ray] structure of crystalline uraninite from Katanga (Belgian Congo), A., 493.

Haddon, W., and Burnett, J. McD., pasted accumulator grid or plate, (P.), B., 481\*. Haden, R. L., and Orr, T. G., experimental dehydration; chemical

changes in the blood of the dog contrasted with those following obstruction of the cardiac end of the stomach, A., 954. Haden, R. L. See also Orr, T. G.

Hadfield, G. H., treatment of sewage sludge, (P.), B., 266.

Hadfield, G. H., and Sand & Shingle, Ltd., coloured building material, (P.), B., 396.

Hadfield, (Sir) R. A., manufacture of steel products, (P.), B., 361\*.

[corrosion-resistant steel] alloys, (P.), B., 648.

Hadjieff, M. D., acidimetric method of determining dextrose using Fehling's solution, B., 107.

Hadlington, D. See Broughton, F. L.

Haeckel, S., spatial models of aromatic compounds and the interpretation of isomerism, A., 1050.

Haedrich, P., Kippe, O., and Metallgesellschaft Akt.-Ges., converting tin ores into the form of pieces, (P.), B., 858\*.

Haege, J., rapid determination of the tin content of tinplate and tinplate residues, B., 438.

Hägg, G., X-ray studies on the nitrides of iron, A., 124. X-ray study of the binary systems of iron with phosphorus,

arsenic, antimony, and bismuth, A., 749.

X-ray investigations of manganese nitrides, A., 1221.

Hägg, G. See also Westgren, A.

Hägglund, E., influence of sugars on the stability of hydrogen sulphite solutions, A., 297.

influence of hydrogen sulphite solutions on sugars at higher temperatures, A., 428.

composition of sugar obtained by complete saccharification of pine wood. I., A., 612.

influence of temperature on sulphite[-cellulose] cooking, B., 125\*.

chemistry of the sulphite-cellulose cooking process, B., 201. importance of hydrogen-ion concentration in sulphite-cellulose cooking, B., 318. production of [white sodium-]cellulose, (P.), B., 390.

Hägglund, E., and Johnson, T., alteration of sugar-like substances

in sulphite-cellulose cooking. I. and II., B., 202, 352. sulphonation of lignin from pine wood. I., B., 241. Hägglund, E., Klingstedt, F. W., and Lund, O., ultra-O., ultra-violet spectral absorption of lignin derivatives, A., 1214.

Hägglund, E., and Urban, H., pine-wood lignin, A., 856.

influence of hydrogen sulphite solutions on sugars at higher temperatures. II., A., 1280.
Hägglund, E. See also Holzhydrolyse A.-G.
Hähle, H. See Scholl, R.

Haehn, H., and Glaubitz, M., staining of bottom-fermentation beer yeasts with methylene-blue, B., 792.

Haehnel, W. See Consort. f. elektrochem. Ind. G.m.b.H., and Herrmann, W. O.

Haendel, M., and Munilla, A., metabolism of heart-muscle. I. Heart-glycogen, A., 1336. Haenny, C. See Marie, C. Haensel, W. See Braun, J. von.

Haeperen, (Mlle.) M. van. See Desmet, (Mlle.) M. Härle, R. See Klenk, E.

Haessler, P., moulding of casein under pressure, (P.), B., 182. Häuber, H. See I. G. Farbenind. A.-G.

Häusler, H., and Loewi, O., fixation of dextrose by blood-cor-

puscles, A., 1477.

Häusler, J., and Kohnstein, B., [colloidal] chromic hydroxide, (P.), B., 17.

Häussler, E. P., and Brauchli, E., specific colour reaction for ergosterol and its transformation products, A., 312. Haffenreffer, A. F. See Cook, J. T.

Haffey,  $C_{\bullet}W$ . See Gonser, B.W.

Hagemann, A., thermal behaviour of phenols, A., 551.

thermal behaviour of phenols. II. The thermodynamics and the mechanism of the thermal decomposition of phenol and its homologues, A., 767.

Hagens, J. F. C., Rosenstein, L., Hirschkind, W., and Barrett Co., manufacture of dicalcium phosphate and ammonium sulphate, (P.), B., 432.

Hager, F. D. See Hiers, G. S.

Hager, G., alterations of soil structure by natural and artificial manures, B., 731.

Hager, L., Popperman, J., and Pine-O-Pine Co., process of laundering and detergent; process of dry-cleaning, (P.), B., 713.

Hagerup, S. See Koefoed, Hauberg, Marstrand, & Helweg A./S. Titan. Haggerty, C. J., electrolytic reduction of acetone at a mercury

cathode, A., 1276. Haggerty, C. J., and Weiler, J. F., vapour pressure of isopropyl

acetate, A., 992.

Haggerty, J. F., and National Gypsum Co., wall board, (P.), B., 325. manufacture of plastic compositions, (P.), B., 325\*.

Hagiwara, K., and Iwasaki, T., manufacture of artificial silk and

other filaments by applying electric current, (P.), B., 242\*. Haglund, T. R., production of metals or alloys together with

refractory materials, (P.), B., 250. [manufacture of chromium or manganese] iron or steel alloys,

(P.), B., 561. Hagman, R. L., high-frequency discharges in helium and neon, A., 482.

Hague, A. P. See Cammell Laird & Co., Ltd. Hague, E. N., and Wheeler, R. V. [with Lowry, T. M.], mechanism of thermal decomposition of normal paraffins, A., 536.

Hagues, G., hydrogen ions in brewing processes. IV. Influence of hydrogen-ion concentration in fermentation. II., B., 261. Hagues, G. See also McCandlish, D

Hahl, H., Schütz, L., and Winthrop Chemical Co., Inc., pharmaceutical products, (P.), B., 959\*.

Hahl, H., and Winthrop Chemical Co., Inc., complex antimony compound, (P.), B., 303\*, 538\*.

manufacture of complex antimony compounds, (P.), B., 454\*. basic ether of resorcinol, (P.), B., 538\*

[manufacture of] basic phenol alkyl ethers, (P.), B., 871\*.

Hahl, H. Sec also I. G. Farbenind, A.-G.

Hahn, A., and Fischbach, E., oxidation of lactic acid in muscle, A., 1103.

Hahn, A., Fischbach, E., and Haarmann, W., dehydrogenation of lactic acid, A., 602.

dehydrogenation of malic acid. II., A., 722. Hahn, A., and Haarmann, W., oxidation of succinic acid. II., A., 1103.

dehydrogenation of citric acid, A., 1489.

Hahn, A. W., oil flotation process [for ores], (P.), B., 250.

Hahn, F., drying oven, A., 167. Hahn, F. L., potentiometric micro-titrations, A., 283.

potential gradient in titrations with acid and alkali and determination of reaction constants, A., 528.

detection and determination of minute amounts of magnesium, A., 1258.

Hahn, G., determination of phosphoric acid requirements of field soils, B., 31.

Hahn, Georg, [occurrence of free substituted methylenes in chemical reactions], A., 1451.

Hahn, Georg, and Stenner, W., synthesis of homogentisic acid, A., 557.

Hahn, O., emanation method as an aid to chemical and physicochemical investigations, A., 737.

Hahn, O., and Imre, L., precipitation and adsorption of small quantities of substances. III. The adsorption law, applications, results, and conclusions, A., 1377.

Hahn, O. See also Bodenstein, M. Hahn, P. L., converting heavy combustible oils into light combustible oils, (P.), B., 881.

Haid, A., and Schmidt, A., effect of compression on the explosive properties of explosive gas mixtures, B., 113. Haid, A., and Selle, H., explosive properties of "Chloratit 3"

containing various amounts of petroleum, B., 961. Haider, C., manufacture of Röntgen ray fluorescent screens, (P.),

B., 606.

Haigh, B. P., chemical action in relation to fatigue in metals, B., 326.

Haigh, L. D. See Griswold, D. J.

Hailwood, A. J., and British Dyestuffs Corporation, Ltd., electrolytic desulphonation of anthraquinonesulphonic acids, (P.), B., 845\*.

Hailwood, A. J. See also Imperial Chemical Industries, Ltd.

Haines, R. B. See Cooper, E. A. Haines, W. T. See Mitchell, H. H.

Haintz, E., cancer and blood-lactic acid, A., 1330.

Haire, R. E., treatment of gypsum, (P.), B., 325. Haitinger, M., and Reich, V., [observation of] fluorescence, A., 1127.

Hake, D. S., and Acheson Graphite Co., calomel electrode vessel, (P.), B., 290.

Hakenbeck, (Frl.) E., polarised fluorescence, A., 488.

Hakes, J. A. See Ferguson, A. Hakol, Ltd. See Hackford, J. E.

Halberstam, A. See Glaser, E. Halbig, P. See Kaufier, F. Haldane, J. S. See Hancock, W.

Haldeman, W. S. See Hale, W. J.

Halden, J. See Halden & Co., Ltd., J. Halden, W., classification of fats. II., B., 441.

Halden, W., and Kunze, R., density of lard, B., 291. Halden & Co., Ltd., J., and Halden, J., photographic developers [in tablet form] and developing processes, (P.), B., 661.

Hale, H., Sullivant, M., and DeWitt, C. B., chlorine absorption

as a substitute for oxygen consumed [in water analysis], B., 190.

Hale, W. J., Britton, J. W., and Dow Chemical Co., manufacture

of aniline and other arylamines, (P., B., 467\*.

Hale, W. J., and Haldeman, W. S., production of [aliphatic] organic acids, (P.), B., 671.

Hales, W. B., critical photo-electric potential of clean mercury and the influence of gases and of the circulation of the mercury on it, A., 228.

Haley, D. E., Nasset, E. S., and Olson, O., certain constituents of the leaf and their relation to the burning qualities of tobacco, B., 417.

Haley, D. E. See also Frear, D.

Haley, J. P., and Pinder, J. H., [burner for] heat treatment of metallic wire or strip, (P.), B., 782.

Haley, R., bubble or blister glass, (P.), B., 645.

Halford, J. O., triarylmethyl carbonates: catalytic decomposition in presence of copper, A., 1066.

Hall, A. D., effect of sodium silicate in increasing the yield of barley, B., 906.

Hall, A. J., comparison of some chemical and physical properties of cotton and viscose silk, B., 430.

action of alkalis and other swelling agents on viscose silk, B.,

Hall, A. J., and Celanese Corporation of America, treatment of cellulose acetate artificial silk, (P.), B., 470\*

Hall, A. J. See also Silver Springs Bleaching & Dyeing Co., Ltd. Hall, E. H., electrical conductivity and optical absorption of metals, A., 20.

photo-electric emission and thermionic emission, A., 482, electrons that are "pulled out" from metals, A., 618. thermionic "A" and "b," A., 969.

Hall, E. L. See Wait, G. R. Hall, E. M. See Prowse, F. J.

Hall, F. G., and Gray, I. E., hæmoglobin concentration of blood of marine fishes, A., 587.

Hall, F. W., and Texas Co., treating hydrocarbon oil, (P.), B., 387

revivifying fuller's earth [from treatment of hydrocarbon eils], (P.), B., 634.

Hall, G., strength testing of cellulose, B., 593. Hall, G. V. See Dawson, H. M.

Hall, H. C., and Bradbury, T. F., aluminium alloy, (P.), B., 24,

Hall, J. See Brit. Celanese, Ltd.

Hall, J. A., and George, W. F. C., treatment of flour, etc., (P.), B., 535.

Hall, J. H., Comerford, J. S., and Taylor-Wharton Iron & Steel Co., air-toughened alloy [manganese] steel, (P.), B., 984.

Hall, J. R., oil-treating process and apparatus, ( $\hat{P}$ .),  $\hat{B}$ ., 670. Hall, L. P. See Richards, T. W.

Hall, R. E., examples and precepts of water conditioning, B., 962. Hall, R. E., Jackson, H. A., Butzler, E. W., Robb, J. A., Hertzell, E. A., and Smith, G. W., phosphate in boiler-water conditioning, B., 342.

Hall, V. C. See Jones, L. A., and Sheppard, S. E. Hall, V. E. See Martin, E. G. Hall, W. K. See Chapman, D. L.

Hall, W. L., Preisler, P. W., and Cohen, B., oxidation-reduction. XIV. Equilibrium potentials of sodium 2:6-dibromobenzenoneindophenol-2'- and -3'-sulphonates, 2:6:2'-trichlorobenzenoneindophenol, and 2:6-dimethylbenzenoneindophenol, A., 769.

Hall,  $\bar{W}$ . L. See also Gibbs,  $\bar{H}$ . D.

Halla, F., carbon dioxide-carbon monoxide equilibrium over copper, A., 651.

determination of nitrogen by Dumas' method, A., 899.

Halla, F., and Staufer, R., X-ray studies in the system leadthallium, A., 124. Haller, H. L. See Levene, P. A.

Haller, J., metamorphosis of insects, A., 1333. Haller, J. See Grasselli Dyestuff Corporation. Haller, W., lyosorption in organic liquids, A., 133.

theory of colloid osmosis, A., 1380. Haller, W., and Trakas, V., influence of dimensions of the capillary en the streaming anomalies of colloidal liquids in the capillary viscosimeter, A., 645.

Haller, W. See also Ostwald, Wolfgang. Hallett, H.S. See Mattick, E.C.V. Halliday, N. See Eddy, W.H.

Hallimond, A. F., atomic volume relations in certain isomorphous series. III., A., 637. formula of glauconite, A., 788.

Hallitt, W. See Broadbent & Sons, Ltd., T.

Hallmann, K., increasing the electrical conductivity and the flexibility of [aluminium] metals or alloys, (P.), B., 216.

Hallock, G. W., and Westinghouse Lamp Co., alloy base for oxide-coated cathodes, (P.), B., 178. Hallonquist, E. G. See Streight, H. R. L.

Halloran, R. A., and Universal Oil Products Co., treatment of distillates from cracking of petroleum oils, (P.), B., 466. Halloran, R. A. See also Terry, J. B. Halma, F. F. Sec Haas, A. R. C.

Halpern, G. See Glaser, E.

Halpern, O., phase theory in thermionics, A., 1358.

Halpin, J. G. See Cruickshank, E. M.

Halton, P., and Fisher, E. A., determination of hydrogen-ion concentration of flour-water mixtures, B., 187.

Halton, P. See also Fisher, E. A.

Halversen, W. V., value of nitrification tests on soils representing extreme contrast in physical and chemical properties, B., 222. Halvorsen, A. L., Travis, P. M., and Emulsion Process Corporation,

manufacture of asphalt emulsions, (P.), B., 588.

Halvorsen, B. F., and Norsk Hydro-Elektrisk Kvaelstofakt.-A./S., purification of gases to be used in the production of ammonia, (P.), B., 95\*.

preparation of alkali silicates soluble in water, (P.), B., 682\*. Hamada, H., spectroscopic observations of the low-voltage nitrogen arc, A., 1116.

Hamada, H. See also Okubo, J.

Hamada, S., and Ema, M., influence of carbohydrate consumption on the protein metabolism at a high-temperature environment, A., 1485

Hamano, S., antirachitic potency of biosterin, A., 853.

**Hamasumi**, M., and **Matoba**, S., solution of the ternary equilibrium diagram and a contribution to the Al-Cu-Zn system, A., 141.

Hamburger, A., photographic sensitive materials, (P.), B., 151.

Hamburger, R., Kaesz, S., Hartig, F., and Standard Brands, Inc., manufacture of yeast, (P.), B., 1029\*.

Hamburger, T. See Riesenfeld, E. H.

Hamer, (Miss) F. M., carbocyanine dyes with substituents

attached to the three-carbon chain, A., 197. chemical study of desensitisers. I., B., 872, 1032. Hamerski, E. See Moraczewski, W. von.

Hamey, A. C., and Stoneham, J., crushing and grinding machine,

(P.), B., 497. Hamill, T. E. See French, H. J.

Hamilton, A. E. See Crago, C. H.

Hamilton, B., and Moriarty, M., factors influencing the excretion of calcium, A., 345.

Hamilton, C. S., and Etzelmiller, R. E., action of alkyl chloro-formates on stibanilic acid, A., 202.

Hamilton, C. S., and Simpson, C. L., β-anilinopropionamide-4

arsinic acid and related compounds, A., 1471.

Hamilton, E. H., and Smith, C. M., determination of phenol in presence of salicylates, B., 1008.

Hamilton, P. See Potter, Boardman & Co., Ltd. Hamilton, T. S. See Mitchell, H. K. Hamilton, W. C., Sims, C. E., and American Steel Foundries, steel [for car wheels], (P.), B., 821.

Hamilton, W. F. See Masson, H. J.Hammar, H. E., chemical composition of Florida Everglades peat soils, with special reference to their inorganic constituents, B., 730.

Hammarsten, (Mile.) G., calcium oxalate and its solubility in the presence of inorganic salts with special reference to the occurrence of oxaluria, A., 1229. Hammer, B. W. See Anderegg, L. T.

Hammerschmidt, W., insulating masses for transformers, B., 563. Hammersley, S. S., and Bolton, J. A., plant for cooling liquids particularly for use in mercerising fabrics, (P.), B., 204.

Hammesfahr, G., imparting a shearing-resistant hardness to

rust-proof knives and scissors, (P.), B., 479.

Hammett, F. S., biology of metals. I. Localisation of lead by growing roots. II. Retardative influence of lead on root growth, A., 362. Hammick, D. L., and Andrew, L. W., determination of parachors

of substances in solution, A., 638.

Hammond, A. S., natural system for the analysis and classification of paper, B., 810.

Hammond, F. Sec Liquid Measurements, Ltd.

Hammond, G., and Fuel Development Corporation, [anti-knocking fuel and its manufacture, (P.), B., 386. anti-knock fuel, (P.), B., 707

Hampel, H., apparatus for continuous drying of shrinking films, particularly for drying of viscose films, (P.), B., 750.

Hampil, B., bactericidal properties of the acyl and alkyl derivatives of resorcinol, A., 356.

effect of pure soaps on the bactericidal properties of phenolic germicides, B., 418. Hampson, R. E. V. See Brit. Launderers' Res. Assoc.

Hampton, H. A., Haworth, W. N., and Hirst, E. L., polysaccharides. IV. Constitution of xylan, A., 1167. Hampton, W. H., treatment of shale, etc., (P.), B., 9, 386.

treatment of bituminous material, (P.), B., 668.

Hampton, W. H. See also Davis, W. N. Hampton, W. M. See Chance Bros. & Co., Ltd.

Hamshere, J. L., mobility distribution and rate of formation of negative ions in air, A., 618.

Hamsik, A., protoporphyrin, A., 455.

preparation of crystalline potassium salts of oxyhæmin, A., 837.

action of formic acid on oxy- and chloro-hæmins, A., 942. change in oxyhæmin on drying, A., 1189.

Hamy, A., quantitative separation of dextrins and gum arabic, B., 298.

Han, J. E. S., iodometric determination of chromic oxide in potassium chromium alum, B., 391.

monosodium glutamate as chemical condiment, B., 1030.

Hanahan, M. L. See Grasselli Chem. Co.

Hanawalt, J. D., influence of the presence of hydrogen on the  $L_{111}$  X-ray absorption edge of palladium, A., 227. X-ray study of the system palladium-hydrogen, A., 494.

Hanawalt, J. D. See also Ingersoll, L. R.

Hance, F. E., chemical treatment of hydraulic dam cores, B., 925.

Hancock, W., Whitehouse, A. G. R., and Haldane, J. S., loss of water and salts through the skin, A., 953.

Hancock, W. C., and Cowan, J. G., crushing strength of unfired fireclay bodies, B., 172

Hand, C. N., Roberts, H. P., and Rubber Service Laboratories Co. catalytic manufacture of thiocarbamides, (P.), B., 511.

Hand, C. N., and Rubber Service Laboratories Co., manufacture of acctaldehyde, (P.), B., 123\*.

Hand, C. N., Smith, C. E., and Rubber Service Laboratories Co., manufacture of thioureas, (P.), B., 916. Hand, D. B. See Sumner, J. B. Hand, P. G. T. See Allmand, A. J.

Handl, W. See Weiss, R.

Handley, A. C., combined filter and separator, (P.), B., 3. Handley, J. H., method for measuring Joule magneto-strictive effect in a cold-drawn wire, A., 495.

Handley, W. H. See Dempster & Sons, Ltd., R.

 ${f Handovsky}$ , H., chronic effects of irradiated saponin and irradiated ergosterol, A., 105. [oxidative catalytic activity of iron], A., 405.

Handovsky, H., and Reuss, A., determination of adrenaline in organs by means of the spectrophotometer. I. Adrenaline content of the adrenals, A., 1201.

Handovsky, H., and Westphal, K., carbohydrate of rabbit's skeletal muscle, A., 715.

Hands, H. J. See Spicers, Ltd.

Hanemann, H., and Edelgussverband G.m.b.H., production of grey cast iron, (P.), B., 400\*.

Hanemann, H. See also Brecht, K. G., Gebhard, K., and Tafel, W. Hanes, C. S., application of the method of Hagedorn and Jensen to the determination of larger quantities of reducing sugars, A., 478.

Haney, C. I. See British Celanese, Ltd., and Dreyfus, H.

Hanford, T. P. See Dalbey, G. E.

Hangleiter, C., Schneider, A., and Zellstoff-fabrik Waldhof,

apparatus for boiling cellulose, (P.), B., 51\*.

Hanke, M. T., and Koessler, K. K., effect of scurvy-producing diets and tyramine on the blood of guinea-pigs, A., 221.

Hankins, G. A., hardness and abrasion testing of metals, B., 603. Hankins, G. A., and Ford, (Miss) G. W., mechanical and metallurgical properties of spring steels as revealed by laboratory 

measurement of excitation [functions] of the helium spectrum,

A., 1116. Hanle, W., and Quarder, B., polarisation in the case of neon electron collision emission and the neon canal-ray emission,

Hanle, W., and Richter, E. F., polarisation phenomena in the gradual excitation of the fluorescence of mercury vapour, A.,

Hanley, W. L., jun., tunnel kilns, (P.), B., 519, 941.
Hanlon, P. J. See Algar, J.

Hann, R. M., Jamieson, G. S., and Reid, E. E., Schiff bases from 5-chlorovanillin, A., 1178.

Hann, R. M. See also Schwartze, E. W. Hanna, H. M. See Grant, R. F., and Wetherbee, H. E.

Hanna, R. W., and Standard Oil Co. of California, pyrogenetic cracking process [for mineral oils], (P.), B., 881.

Hannerz, B. See Palmaer, W. Hannich, W., colouring of small glass beads and of Christmas tree ornaments with aniline dyes, B., 391.

Hanovia Chemical & Manufacturing Co., process for securing good electrical contact with crystalline cuprous oxide, (P.), B.,

production of crystalline cuprous oxide upon copper surfaces, (P.), B., 479.

apparatus for measuring ultra-violet radiations, (P.), B., 1021. Hansard, C. S., and Netzel, A. E., air and gas cleaner, (P.), B.,

80, 665\*.

Hanseatische Apparatebau Gesellschaft. See Dents. Gasglühlicht-Auer-Ges.m.b.H.

Hanseatische Mühlenwerke Akt.-Ges., and Rewald, B., dressing of leather, skins, etc., (P.), B., 369.

Hansen, D. A., preservation of fish and fish derivatives, (P.), B., 868.

Hansen, F. J. M., production of liquid hydrocarbons, (P.), B., 507,

Hansen, H. V., simple accelerated exposure test for varnishes and lacquers, B., 104.

Hansen, M., [solid] solubility of copper in silver, B., 753. Hansen, M. See also Bauer, O.

Hansen, N. L., determination of stability of smokeless powder and guncotton by measurements of hydrogen-ion concentrations, B., 113.

Hansen, S., significance of cholesterol in the formation of gallstones, A., 465.
Hansen, W. C., studies on Portland cement compounds by the

X-ray diffraction method, B., 20.

Hanson, D., effects of nickel and chromium on cast iron. I. and II., B., 981.

Hanson, E. R. See Whitmore, F. C.
Hanson, N. W., and James, T. C., addition of halogens to unsaturated acids and esters.
II. Addition of "bromine chloride" to phenylpropiolic acid, A., 63.

Hanson, R. L., photo-E.M.F. in selenium, A., 990.

tzsch, A., esters of aminoazobenzenesulphonic acids, NR<sub>2</sub>·C<sub>6</sub>H<sub>4</sub>·N·N·SO<sub>2</sub>·OC<sub>n</sub>H<sub>2<sup>n</sup>+1</sub>, A., 693. Hantzsch,

constitution of normal diazotates and diazohydrates, A., 805. Hantzsch, A., and Carlsohn, H., properties of salt-like compounds and atomic structure, A., 1219.

Hantzsch, A., and Düringer, F., chemical changes of acids and salts in solution based on refractometric data. II., A., 1385.
Hantzsch, A., and Voigt, W., determination of the acidity of

undissociated acids with dimethylaminoazobenzene as indicator, A., 666.

aminoazobenzenes and their salts, A., 693.

Hanus, J., and Hovorka, V., reaction of cupric salts with thiosulphate, A., 410.

Hanus, J., Jllek, A., and Lukas, J., oximino-derivatives of p-bromobenzoylacetone and the corresponding dioxime, A., 1073.

Hanuš, J., and Vořišek, J., action of hydrazine on some un-

saturated acids,  $C_nH_{2n-2}O_2$ ,  $C_nH_{2n-4}O_2$ ,  $C_nH_{2n-6}O_2$ , A., 677. Hanzlik, P.J., determination of the potency of digitalis; pigeon-

emesis, A., 721.

Hanzlik, P. J., and Stockton, A. B., results with the pigeonemesis method of estimating the probable therapeutic dose of digitalis, A., 721.

Hanzlik, P. J. See also Johnson, C. C.

Hangood, C. H., and De Laval Separator Co., [centrifugal] separator

ation of impurities from liquids, (P.), B., 543.

Happel, P., Liesegang, R. E., and Mastbaum, O., electrolysis in gels. I. and II., A., 776, 1008.

Happer, J. R., manufacture of [compound] paper, (P.), B., 243. [machine for] manufacturing [sheet] paper, (P.), B., 894.

Hara, K. See Mitsukuri, S. Hara, M., proteins of buckwheat flour, A., 107. Hara, R. See Sinosaki, H. Harada, S., glycogen. I., A., 1479. Harada, T., new thiocholine bromide, A., 1283.

Haraldsen, H., thermal transformation of serpentine, A., 535. Harang, L. See Bräkken, H.

Harary, S., method of preparing buckram, (P.), B., 895.

Harbaugh, W. Le C. See French, H. J.

Harbeek, E., [apparatus for solvent] removal of grease and oil from metal articles, (P.), B., 480.

Harbort, E., zirklerite, A., 45. Hardacre, R. W., and Perkin, A. G., reduction products of hydroxyanthraquinones. X., A., 319.

Harden, A., water content of the yeast cell, B., 107. Harden, A., and Henley, F. R., equation of alcoholic fermentation.

II., A., 607

Harden, W. C., and Drake, N. L., sulphonphthalcins, A., 441,

Harder, O. E., composition for lithographing ink, (P.), B., 610.

Hardesty, J. O. See Ewing, D. T.

Hardgrove, R. M. See Fuller Lehigh Co. Hardin, G. H. See Zerban, F. W. Harding, E. P. See Brewer, R. E., and Stoppel, A. E.

Harding, V. J., and Downs, C. E., blood-sugar and amino-acidnitrogen in lactation in women; lipoid and inorganic phosphorus, A., 1483.

Harding Chemical Co., Ltd., and Clutterbuck, W. H., prevention of settling out of paste dyes, (P.), B., 674. Harding Chemical Co., Ltd., Clutterbuck, W. H., and Wooller, A.,

wetting-out agent for use in textile industries, (P.), B., 811.

Hardnung, V., technique of photographic measurement of absorption in the ultra-violet, A., 1023.

Hardtmann, M. See Grasselli Dyestuff Corporation.

Hardy, A. C., Cole, P. I., and Ricker, C. W., jun., colour of wheat flour, B., 794.

Hardy, D. V. N., improved calcium chloride tube, A., 786. introduction of the triphenylmethyl group into phenols. 11.,

Hardy, F., and Lewis, A. H., rapid electrometric method for measuring "lime requirements" of soils, B., 183.
Hardy, L. V. See Smith, George Frederick.

Hardy, W. B., free and bound liquid in gels, A., 137.

Hardy, Z. See Penau, H.

Hargreaves, F., and Hills, R. J., work-softening and a theory of intercrystalline cohesion, B., 326.

Hargreaves, H. See Chaffer, C.

Hargreaves, J., dispersion electrons of lithium, A., 230. effect of a nuclear spin on the optical spectra, A., 972. dispersion electrons in the one-electron problem, A., 1122. Hargrove, G. C. Sco Gasoline Products Co.

Hari, C., corrosion of concrete, B., 777.

Harig, G., absorption of ultra-violet light by liquid carbon dioxide, A., 236.

Hariharan, K. V., Menon, K. N., and Simonsen, J. L., a-isopropylglutaconic acid, A., 679\*. Hariharan, K. V. Seo also Gibson, C. S.

Haring, M. M., and Bosche, E. G. V., potential of the nickel electrode, A., 402.

Harington, C. R., resolution of dl-thyroxine, A., 313. Harington, C. R., and McCartney, W., synthesis of an isomeride of thyroxine, and of related compounds, A., 813.

Harington, C. R., and Randall, S. S., iodine-containing compounds of the thyroid gland; isolation of dl-3:5-di-iodotyrosine, A.,

Harington, C. R., and Scott, D. A., insulin. I. Chemical observations, A., 851.

Harington, C. R. See also Ashley, J. N.

Harkevitsch, N. K., reversal of charge of collodion membranes in solutions of alkaloids, A., 264.

Harkins, H. H., and Johnson, T. B., pyrimidines. CV. Test for thymine and 5-methylcytosine in presence of uracil and cytos-

Harkins, H. H. See also Johnson, T. B.

Harkins, W. D. [with Ginsberg, B., Gans, D. M., and Jordan, H. F.], electrical relations at surfaces, spreading of liquids, thickness of surface films, and the drop-weight and ring methods for the determination of surface tension, A., 1141.

Harkins, W. D. [with Ginsberg, B., Wampler, R. W., Young, T. F., Morgan, J. W., and Beeman, N.], surface energy and the orientation of molecules in surfaces as revealed by surface

energy relations, A., 491. Harkins, W. D. [with Morgan, J. W., Beeman, N., Ginsberg, B., and Freud, B. B.], stability of emulsions, unimolecular and multimolecular films, thickness of the water film on salt solutions, and spreading of liquids, A., 262.

Harkins, W. D., and Beeman, N., emulsions: stability, area per molecule in the interfacial film, distribution of sizes, and the oriented wedge theory, A., 1005.

Harkins, W. D. See also Freud, B. B. Harkness, R. W. See Hogness, T. R.

Harkom, J. F., breaking a foam into liquid particles and vapours and gases, (P.), B., 1001.

Harlan, W. R., and Hixon, R. M., nicotine dusts, B., 301.

Harlow, F. J., thermal expansions of mercury and vitreous silica.

Harmsma, (Frl.) A., determination of the absorbing capacity of the ergot alkaloids in the ultra-violet and a practical application, A., 79.

Harmsma, (Frl.) A. See also Itallie, L. van.

Harned, H. S., E.M.F. of uni-univalent halides in concentrated aqueous solutions, A., 513.

Harned, H. S., and Robinson, R. A., ionic concentrations and activity coefficients of weak electrolytes in certain salt solutions, A., 140.

Harner, L. S. See Blomfield, A. L.

Harnes, A. R., biometry of calcium, inorganic phosphorus, cholesterol, and lipoid phosphorus in the blood of rabbits. I. Normal rabbits, A., 206.

biometry of calcium, inorganic phosphorus, cholesterol, and lipoid phosphorus in the blood of rabbits. II., A., 1096.

biometry of calcium, inorganic phosphorus, cholesterol, and lipoid phosphorus in the blood of rabbits. III. Influence of lipoid phosphorus in the blood of rabbits. various types of light environment, A., 1335.

biometry of calcium, inorganic phosphorus, cholesterol, and lipoid phosphorus in the blood of rabbits. IV. Effects of a malignant tumour, A., 1481.

Harney, T. R., comparison of modern chamber sulphuric acid plants, B., 775.

Harnsberger, A. E., distillation of [mineral] oil, (P.), B., 466\*. Harnwell, G. P., angular scattering of electrons in helium, neon, hydrogen, and nitrogen, A., 619.

electron scattering in atomic and molecular hydrogen, A., 1211.

Harper, A. R. See Williams, W. M.

Harper, H. J., and Murphy, H. F., nitrogen contents of weeds and their relation to soil fertility, B., 532.

potential fertility of Oklahoma soils, B., 532. Harper Electric Fornace Corporation. See FitzGerald, F. A. J. Harr, K., manufacture of sintered magnesite brick, (P.), B., 96\*. Harrassowitz, H., South European red earths, A., 169.

Harrel, C. G., and Lanning, J. H., relation of quantity of sodium sulphato to time of digestion in protein determination, B., 262.

Harrel, C. G. Seo also Grewe, E., and Patterson, C. J. Harrell, C. L., serum-calcium in the negro, A., 1326.

Harres, L. See Auwers, K. von.

Harrington, P. J. See Frolich, P. K. Harris, C. F. See Fraser, R. R. Harris, E. S. See Osterhout, W. J. V.

Harris, G. J., and Imperial Chemical Industries, Ltd., joint production of sulphuric acid and cement, (P.), B., 641.

Harris, H., purification of antimonial lead alloys and other antimonial metals, (P.), B., 215. treatment of solutions containing tin and arsenic for pre-

cipitation of tin, (P.), B., 644\*. Harris, J. A., correlation between soil salinity and flowering date

in cotton, B., 447.

Harris, J. A. See also Ball, R. W.

Harris, J. E., and Western Electric Co., Inc., electron-discharge device, (P.), B., 25. Harris, J. E. G. See Barnes, R. S.

Harris, J. McA., jun., synthesis of isoamylcyclopentane, A., 1170. Harris, L., and Wooster, C. B., chemical reactions of dried substances. I. Ammonia and phosphorus pentoxide, A., 1154.

Harris, L. J., combination of proteins and amino-acids with acids and alkalis. II. Titration curves of amino-acids in presence of formaldehyde, A., 648.

dissociation constants of valine and glutamic acid, A., 1384.

Harris, L. J., and Moore, T., hypervitaminosis and vitamin balance. I., A., 105. hypervitaminosis and vitamin balance. II. Specificity of vitamin-D in irradiated ergosterol poisoning. III. Pathology

of hypervitaminosis-D, A., 610. hypervitaminosis and vitamin balance. IV. An instanco of

vitamin balance, A., 1497 Harris, L. J., and Stewart, C. P., effect of excessive doses of

irradiated ergosterol on the calcium and phosphorus content of the blood, A., 610. Harris, L. J. See also Hopkins, (Sir) F. G.

Harris, N., rust-resisting [tinned-iron] can, (P.), B., 214. Harris, W. E. treatment of mixed [copper-zinc-lead] concentrates from [Canadian] base-metal sulphide ores, B., 819.

Harris, W. W., manufacture of fertilisers and hydrocarbons from coal and other carbonaceous materials, (P.), B., 969.

Harrison, C. F. R., and Imperial Chemical Industries, Ltd., separating gases and liquids under pressure, (P.), B., 544. separation of gaseous and liquid products [under pressure], (P.), B., 544.

Harrison, D. C., indophenol reaction in biological oxidations, A., 1489.

Harrison, D. C. See also Mellanby, E.

Harrison, D. M., and McKenzie Mortar Co., lime-hardening composition, (P.), B., 777.

Harrison, D. N. See Dobson, G. M. B.

Harrison, E. P., jun. See Stander, H. J. Harrison, E. W. See Laing, M. E.

Harrison, F. C., systematic study of some Torula, A., 471.

Harrison, G. B. See Toy, F. C.

Harrison, G. R., intensity relations in the spectra of titanium. I. Line intensities in the stronger multiplets of Ti 1 and Ti 11., A., 225.

intensity relations in the spectra of titanium. III. Intensities

in super-multiplets of Ti 1, A., 1351.

Harrison, G. R., and Engwight, H., intensity relations in the spectra of titanium. II. Relative intensities of the stronger multiplets of Ti r, A., 860.

Harrison, H. A. See Morgan, G. T.

Harrison, H. C., manufacture of metal sheets [by electrodeposition], (P.), B., 440.

Harrison, J. M., heat-exchanging apparatus, (P.), B., 963.

Harrison, L. B., chlorophenol tastes in waters of high organic content, B., 494.

Harrison, L. B. See also Bulger, H. A.

Harrison, T. H., and Stiles, W. S., Talbot's law in photo-electric cells, A., 1356.

Harrison, T. H. See also Carruthers, G. H.

Harrison, T. M. See Courtaulds, Ltd.

Harrison, W., manufacture of artificial filaments from viscose, (P.), B., 595.

Harrison, W., and British Vegetable Parchment Mills, Ltd., vegetable parchment, (P.), B., 470.

Harrison, W. H., and Vridhachalam, P. N., application of the antimony electrode to the determination of the  $p_{\Pi}$  value and lime requirement of soils, B., 905.

Harrison, W. N., Saeger, C. M., jun., and Krynitsky, A. I., cast

iron for enamelling purposes, B., 96. Harrison, W. N., and Thaler, G. T., test for adhesiveness of

vitreous enamels to metal, B., 129. Harron, G. A., jun., and Barron, E. S. G., blood-cell metabolism. I. Effect of methylene-blue and other dyes on the oxygen consumption of mammalian and avian erythrocytes, A., 87.

Harron, G. A., jun. See also Barron, E. S. G.

Harrop, J. See Hughes, W. S.

Harsanyi, E., production of electric radiating elements, particularly electron-emitting elements for electric discharge devices, (P.), B., 606.

Harshaw, W. J., Homer, G. L., and Harshaw Chemical Co., extraction of copper-nickel matte, (P.), B., 1019.

Harshaw, W. J. See also International Nickel Co.

Harshaw Chemical Co. See Harshaw, W.J. Hart, A.J.C. See Rodwell, A.G.

Hart, E. B., new inorganic factor as supplement to iron in hamoglobin building, A., 1094.

Hart, E. B., Steenbock, H., Teut, E. C., and Humphrey, G. C., diet and calcium assimilation. XI. Influence of cod-liver oil on calcium metabolism of milking cows. XII. Influence of hays cured with varying exposure to sunlight on calcium metabolism of milking cows, A., 1497.

Hart, E. B. See also Cruickshank, E. M., Elvehjem, C. A., and Waddell, J.

Hart, L., method for wool oil unsaponifiables, B., 332.

analysis of insecticides containing fluorine compounds, B.,

Hart, M. C. See Speer, J. H.

Hart, R., geology and mineralogy of soils. I. Study of a region characterised by diverse rocks and partly covered with glacial

drift, A., 289. Hart, Ralph, water-miscible mineral oil preparations, B., 159. determination of neutral fat in sulphonated oils, B., 403.

determination of organically-combined sulphur in sulphonated oils, B., 947.

formula for calculating the organically-combined sulphur trioxide in sulphonated oils, B., 988.

Hart, Russell, photo-electric cell, (P.), B., 986.

Harteck, P., vapour pressure and chemical constant of chlorine, A., 22.

vapour pressures and chemical constants of silver, gold, copper, fead, gallium, and tin, A., 22. internal friction of atomic hydrogen, A., 253.

Harteck, P., and Kopsch, U., action of oxygen atoms on hydrocarbons, A., 1264.

Harteck, P. See also Bonhæffer, K. F.

Harteneck, A. See Ambros, O.

Harter, I., and Fuller-Lehigh Co., furnace, (P.), B., 663.

Hartford-Empire Co., lehrs for annealing glassware, (P.), B., 684.

Hartford-Empire Co. See also Peiler, K. E.

Hartig, F. See Hamburger, R. Hartl, K., and Starlinger, W., physico-chemical behaviour, as dissolved sodium salts, of electro-dialytically purified protein groups from pathological human blood- and exudate-plasma. I. and II., A., 203.

Hartley, G. S., [laboratory] crucible holder and stand, (P.), B., 193.

Hartley, (Sir) H. See Buckley, P. S.
Hartley, J. W., apparatus for separating materials of different density, (P.), B., 665\*.

Hartly, D. See Gyulai, Z.

Hartman, A. M. See Turner, W. A. Hartman, H. See Robinson, R. H. Hartman, W. W., and Dreger, E. E., [preparation of] methylene bromide, A., 1038.

Hartman, W. W. Sec also Clarke, H. T.

Hartmann, A., and American Bemberg Corporation, copper oxide-ammonia cellulose solution for spinning artificial silk by the stretch-spinning process, (P.), B., 1042.

 Hartmann, A. See also Eule, M.
 Hartmann, A. F., chemical changes occurring in the body as the result of certain diseases. I. Effects of diarrhœa, vomiting, dehydration, and oliguria on the acid-base balance of the plasma of infants with mastoiditis, A., 210.

Hartmann, A. F., and Darrow, D. C., chemical changes occurring in the body as the result of certain diseases. III. Composition of the plasma in severe diabetic acidosis and the changes taking place during recovery, A., 594.

Hartmann, A.F., and Smyth, F.S., chemical changes in the body

occurring as the result of vomiting, A., 210.

Hartmann, A. F. See also Darrow, D. C. Hartmann, B. G., and Hillig, F., malted milk; action of enzymes of malt on milk solids during manufacture, B., 697.

Hartmann, B. G. See also Hillig, F.

Hartmann, E., and Zellner, J., chemistry of the higher fungi. XIX. Polyporus pinicola, Fr., A., 108.

Hartmann, E. See also Rabe, P. Hartmann, H., and Schneider, R., b. p. of magnesium, calcium, strontium, barium, and lithium, A., 754.

Hartmann, II. See also Ebert, F.

Hartogs, J. C., spinning of artificial silk from viscose, (P.), B., 975. bobbins for use in preparation of artificial silk from viscose, (P.), B., 976.

Hartong, B. D., determination of tannin [in beers and worts],

B., 186.

Hartree, D. R., distribution of charge and current in an atom consisting of many electrons obeying Dirac's equations, A., 621.

wave-mechanics of an atom with a non-Coulomb central field. IV. Further results relating to terms of the optical spectrum, A., 1125.

Hartree, D. R. See also Waller, I.

Hartshorn, L., and Oliver, D. A., measurement of the dielectric constants of liquids, with a determination of the dielectric constant of benzene, A., 628.

Hartstoff-Metall Akt.-Ges. (Hametag), beaters for impact pulver-

ising mills, (P.), B., 626. pulverising mill, (P.), B., 800.

Hartstoff-Metall Akt.-Ges. (Hametag). Sec also Podszus, E.

Hartung, C. A., sterilisation of liquids, (P.), B., 628.

Hartung, W. H., catalytic reduction of nitriles and oximes, A., 184.

Hartung, W. H., and Munch, J. C., amino-alcohols. I. Phenyland p-tolyl-propylamine, A., 1066.

anæsthetics; acylanilino derivatives, A., 1178. Hartwell, B. L., and Crandall, F. K., substitution of stable manure

by fertilisers, green manure, and peat. III., B., 831. Hartwell, B. L., and Smith, J. B., Rhode Island soils, B., 532. Hartwell, B. L., Smith, J. B., and Damon, L. C., effect of sodium

chloride and carbonate on the growth of asparagus, B., 297. Hartzell, A., tolerance of different species and varieties of plants

to naphthalene vapour, B., 900. Hartzell, A., Lathrop, F. II., O'Kane, W. C., and Moore, P., (Crop Protection Inst.), colloidal sulphur and its manufacture, (P.), B., 644.

Harvel Corporation, and Harvey, M. T., treatment of cashew nutshell and allied oils, (P.), B., 179.

Harvel Corporation. See also Harvey, M. T.

Harvey, A. See Curtis, W. E. Harvey, C. E. See McBain, J. W.

Harvey, E. H., corrosive action of sulphur monochloride, B., 16. Harvey, E. H., and Perkins Glue Co., vegetable-glue base, (P.),

Harvey, E. N., photo-synthesis in absence of oxygen, A., 611. reducing intensity of luminous bacteria, A., 1341.

stability of luminous substances of luminous animals, A., 1490. Harvey, M. T., and Harvel Corporation, resin from cashew nutshell oil; cashew nutshell oil reaction product; substitute

for shellac, etc., (P.), B., 903\*.

process, steps, and product of reaction of cashew nut-shell oil; modified cashew [nut-]shell liquid [varnish]; cashew nutshell oil condensation product, (P.), B., 947.

Harvey, M. T. See also Harvel Corp. Harvey, N., luminescence during electrolysis, A., 1403.

Harvey, R. B. See Regeimbal, L. O. Harvey, W. F. See Lambie, C. G. Harvey, W. G., magnesium and its alloys in aircraft, B., 983. Harvey Holford Separators, Ltd. See Holford, H.J.

Harwood, A. A., seeds of Monarda punctata, A., 729. Harwood, H. F. See Holmes, Arthur.

Hasbrouck, L. B. See Eclipse Textile Devices, Inc. Hase, R., heat spectrum of solid and liquid iron, A., 227.

resistance of nickel-chromium thermo-elements towards molten metals, B., 721.

Hasebrink, (Frl.) A. M., passivity [of chromium], A., 146.

Hasegawa, K., sulphur in cast iron, B., 981.

Haselhoff, effects of nitrogen fertilisers, B., 532.

Hasenbäumer, J., significance of the physical and chemical properties of soils in the old and new soil classification, B., 693

Hasenbäumer, J., Balks, R., and Bach, M., acid content and lime requirement of cultivated soils, B., 335.

Hasenfratz, V., principle extracted from Sphacele parviflora, Linn., A., 106.

Hasenöhrl, R. See Depisch, F

Hashimoto, N. See Sahashi, Y.

Haskelberg, L. See Weizmann, M.

Haskell, C. C., and Forbes, J. C., strontium thioacetate as an antidote in poisoning by mercuric chloride, A., 470. Haskell, R. See Mackenzie, K. G.

Haslam, W. H., treating and drying fish, (P.), B., 536. Hasler, M. F. See Goetz, A.

Hasling, J., jun., and Fleischmann Co., manufacture of yeast, (P.), B., 866.

Haslwanter, F. See Lindner, J.

Hass, S. See Scholl, R.

Hassé, H. R., and Cook, W. R., determination of molecular forces from the viscosity of a gas, A., 1219.

Hassel, O., isomorphism in cubic crystals of hexammino- and pentammino-aquo-complex salts, A., 18.

is the lattice of tetragonal mercuric cyanide a molecular or a radical lattice? A., 988.

Hassel, O., and Kringstad, H. [with Oftedal, I.], cobaltammine chloratosulphates and perchloratosulphates, and a comparison of the lattice constants of cobaltiates and chromiates, A., 1222. Hassel, O., and Luzanski, N., space lattice of the trigonal modification of acetamide, A., 870.

Hassel, O., and Nilssen, S., crystal structure of bismuth fluoride, A., 987.

Hassensall, L. W., device for cooling liquids, (P.), B., 580.

Hastings, A. B., rôle of hæmoglobin in the blood, A., 1324.

Hastings, A. B. See also Sendroy, T., jun.
Hastings, J. J. H., and Walker, T. K., preservative principles of hops. X. Modification of Ford and Tait's gravimetric process for the evaluation of hops, B., 533.

Hatakeyama, T. See Shimizu, T.

Hatch, B. F., phenol recovery [from coke-oven effluent] and treatment; works of the Hamilton Coke and Iron Company, B.,

Hatcher, R. A., and Haag, H. B., preparation of digitalis suitable for injection or oral administration, B., 909.

Hatcher, R. A. See also Haag, H. B.

Hatcher, W. H., and Hill, A. C., hydrogen peroxide as an oxidising agent in acid solution. IX. Oxidation of keto-acids, A., 424. Hatfield, A. E., and Achille Serre, Ltd., purifying dry-cleaning solvent, (P.), B., 353\*.

Hatfield, A. E., and Alliott, E. A., cleaning process, (P.), B., 895\*. manufacture of soap, (P.), B., 903\*

Hatfield, A. E. See also Alliott, E. A.

Hatfield, H. S., electrodes for indication and determination of the chemical composition of liquids, (P.), B., 252.

Hatfield, W. H., and Green, H., manufacture of metal articles and alloys therefor, (P.), B., 176.

metal articles for use in chemical and similar processes and alloys therefor, (P.), B., 821. Hatmaker, J. R., icc-cream mixture and its preparation, (P.),

B., 659. Hatschek, E., intensity of the Tyndall light in agar gels as a

function of the degree of hydration, A., 1008.

Hatt, H. H., production of pinacols in the reaction between a carboxylie ester and a Grignard reagent, A., 1175. formation of triphenylmethylphosphinic acid from triphenyl-methoxyphosphorus dichloride. II. Mechanism of the

reaction, A., 1470. Hatta, S., absorption velocity of gases by liquids, A., 150. absorption velocity of gases by liquids. II. Absorption of carbon dioxide by sodium hydroxide solution, A., 1229.

Hattiangadi, R. R. See Prasad, M.

Hattingherg, V., metabolism in muscular work on a pure fat diet, A., 1484.

Hattori, S., isosakuranetin from the flowers of Pseudaegle trifoliata,

Hatz, (Frl.) L. See Kiss, A. von. Haubold A.-G., C. G., screening centrifuges, (P.), B., 1036. Haufe, E. See Foerster, F.

Haug, A. J., and Haug, R. J., thickening of [paper] pulp, (P.), B., 811.

Haug, R. J. See Haug, A. J.

Hauge, S. M., and Trost, J. F., distribution of vitamin-A in maize,

Haultain, H. E. T., indicating the size of the particles in ore pulp

flowing in conduits, (P.), B., 330.

Haupt, H. S. See Lange, N. A.

Haurowitz, F., detection of active hydrogen atoms with zinc ethyl, A., 283.

blood pigments. X. Specificity of hæmoglobin and von Krüger's reaction, A., 942.

Haurowitz, F., and Waelsch, H., blood pigments. IX. Linking between the protein and the prosthetic group in hamoglobin, A., 713.

Haurowitz, F., and Zirm, K., porphyrins and their metallic salts, A., 334.

Haurowitz, F. See also Turnwald, II.

Hausen, J., manufacture of porous material [for receptacles containing explosive or combustible gases], (P.), B., 424.

Hauser, E. A., thixotropy of dispersions of small concentration. I., A., 763.

X-ray investigation of the structure of cellulose, B., 318.

rubber structure research and its bearing on the elastic properties of colloids in general, B., 333.

Hauser, E. A., and K.D.P., Ltd., manufacture of rubber, (P.), B., 949\*.

Hauser, E. A., Miedel, H., and Hünemörder, M., new microscopical methods in connexion with problems of vulcanisation, B.,

Hauser, E. A. See also K.D.P., Ltd. Hauser, H. See Weber, J.

Hausleiter, F. H., photomechanical printing, (P.), B., 624.

producing even coatings on transparent plates, films, etc., to serve as colour screens and for other photographic purposes, (P.), B., 961.

Hausmann, W., and Krumpel, O., absorption by dyes and leucocompounds as a pre-condition of photobiological sensitisation in the ultra-violet, A., 1103.

Hausser, J. See Chuit, P. Havard, R. E., and Kerridge, P. T., immediate acid change in shed blood, A., 1189.

Havekoss, H. See Hückel, W. Havelock, T. H., dispersion of double refraction in quartz, A., 742

Havenhill, L. D., ash content of podophyllum resin, B., 365. Hawes, D. M. A. G., apparatus for extracting moisture from

materials, (P.), B., 2

Hawk, C. O. See Smith, D. F. Hawk, P. B., cod-liver oil and the antimony trichloride reaction for vitamin-A, A., 1111.

Hawke, C. E. See Carborundum Co., Ltd. Hawkes, L., supercooled water, A., 252, 991.

Hawkesworth, A. S., manufacture of nitrocellulose smokeless powder, (P.), B., 798.

Hawkins, J. A., reducing powers of different sugars for ferricyanide, A., 1477.

micro-determination of reducing sugars in blood and urine, A., 1478

Hawkins, J. A., and Van Slyke, D. D., determination of reducing sugars in blood and urine, A., 462.

rates of sugar disappearance and carbon dioxide formation during fermentation of dextrose, A., 1491.

Hawkins, J. A. See also Van Slyke, D. D.

Hawley, C. G., and Centrifix Corporation, centrifugal fixture, (P.), B., 459.

centrifugal filter, (P.), B., 876.

utilising the heat of gases, (P.), B., 1001. tank[-outlet] filter, (P.), B., 1036.

Hawley, L. F. See Dadswell, H. H. Haworth, E. See Andrews, D. H. See Dadswell, H. E.

Haworth, F. E., voltage regulator for gas discharge X-ray tubes, A., 1262.

Haworth, R. D., constitution of linoleic acid, A., 1040.

Haworth, R. D. See also Anderson, C. G., Callow, R. K., Clemo,

G. R., Gulland, G. M., and Hampton, H. A. Haworth, W. N., and Long, C. W. [with Goodyear, E. H.], conversion of tetramethyl-y- and -δ-gluconolactones into corresponding mannonolactones and of trimethyl-γ- and -δ-xylonolactones into corresponding lyxonolactones, A., 426.

114 Haworth, W. N., and Peat, S., synthesis of 1-2:3:4:6-tetramethyl- $\delta$ -gluconolactone and of l-2:3:4:6-tetramethyl- $\delta$ -mannonolactone from l-2:3:5-trimethylarabofuranese, A., 425. Hawran, B. See Clar, E. Hay, (Miss) K. See McBain, J. W. Hay, R., and Higgins, R., tempering changes in steels, B., 436. Hayakawa, E. See Okada, H. Hayasaka, E. See Inawashiro, R. Hayashi. See Wohlgemuth, J. Hayashi, I. See Tominaga, K. Hayashi, K., Nishimura, Y., and Okuyama, M., mode of combination of carbon dioxide in the blood, A., 86. Hayashi, S., steric relationships in the dismutation of phenyl-glyoxal hydrate by various bacteria, A., 607. ion content of mother and embryo, A., 718. parenteral absorption of colloids, II., A., 845. Hayashi, T. See Kondo, K. Hayde, S. J., and American Aggregate Co., burning of argillaceous material, (P.), B., 520.

Hayden, H. P., and Barber Asphalt Co., preventing evaporation from concrete during curing, (P.), B., 357. Hayden, O. N. See Du Pont de Nemours & Co., E. I. Hayek, E. See Klemenc, A. Hayes, C. I., electric furnace, (P.), B., 901. Hayes, H. K., Immer, F. R., and Bailey, C. H., correlation studies with diverse strains of spring and winter wheats: inheritance of quality, B., 491. Hayes, J. C., jun., and Freyn Engineering Co., gas washer, (P.), B., 801. Hayes, J. C., jun. See also Willcox, F. H.
Hayes-Gratze, E. V., electrodeposition of chromium, (P.), B., 26.
Hayes-Gratze, E. V. See also Walsh, V. G. Haynes, F., and Archbold, H. K., physiology of apples. X. Chemical changes in stored apples, A., 362. Haynes, R., differentiation of safranine in cytology, A., 342. Hays, B. B. See Wang, C. C. Hays, I. M. See Salmon, W. D. Haythornthwaite, A., chemotherapy of some bromine derivatives of phenylarsinic acids and arsenobenzenes, A., 833. Hayward, E., apparatus for continuous chemical, heat, or other treatment of materials, (P.), B., 701.

Hazard, R., and Polonovski, Michel, rôle of the tertiary amine group in the dipiperidine nucleus, A., 600. Hazard, R. See also Polonovski, Michel. penetration of respiratory insecticides into the tracheal system by keeping open the tracheal valves, B., 410. Hazell, E. See Naugatuck Chem. Co. Hazlehurst, H. E., and Margetson, O., powdered fuel burners, (P.), B., 746. Hazlehurst, H. E. See also Gasified Fuel, Ltd. Hazuková, R. See Balaš, F. Head, P. H., strengthened glass, (P.), B., 20.

Hazeley, E. See Courtaulds, Ltd. Hazelhoff, E. H., carbon dioxide, a chemical accelerating the

strengthened glass sheets or plates, (P.), B., 323.

impregnation of permeable substances with rubber latex, (P.), B., 786.

Heal,  $\hat{H}$ . R. See Clarkson, T.

Healey, C. J., spinning of artificial silk, etc., [to obtain cross-winding], (P.), B., 811. manufacture of artificial filaments, (P.), B., 893.

Heames, R. M. See Surface Combustion Co.

Heap, B., and Chloride Electrical Storage Co., Ltd., [filling for plates of] electric accumulators, (P.), B., 606.

Heap, B., and Electric Storage Battery Co., making dry-storagebattery plates, (P.), B., 859.

Heap, B. See also Chloride Electrical Storage Co., Ltd.

Heap, T., and Robinson, R., anthexanthins. IX. Syringetin, A., 326.

Heaps, C. W., Hall effect in galena and molybdenite, A., 248. Heaps, C. W., and Taylor, J., discontinuities of magnetisation in

iron and nickel, A., 1369. Heath, A., and Colclough, H., saggers or receptacles for use in

firing pottery, (P.), B., 645.

Heath, B. V., spectroscopic examination of food dyes, B., 936.

Heath, O. V. S., method of water control for sand cultures, B., 370. Heath, S. B., and Dow Chemical Co., preparation of Epsom salts, (P.), B., 643.

Heathcoat, F. See Bennett, G. M. Hebden, J. C. See Brown, W. F.

Heberlein, G., and Heberlein Patent Corporation, treatment of vegetable fibrous materials to produce wool-like effects. (P.). B., 640\*.

treatment of vegetable fibrous materials [to give wool-like effects], (P.), B., 976\*.

Heberlein & Co. Akt.-Ges., improving vegetable fibrous material (P.), B., 716.

Heberlein & Co. Akt.-Ges. See also Bodmer, A.

Heberlein Patent Corporation. See Heberlein, G.
Hebert, T. J., and Pearce, J. N., influence of the solvent on the optical rotation of ethyl tartrate, A., 295.

Hebler, F., technique and economics of mechanical dispersing processes, B., 39.

Hecht, F., and Reich-Rohrwig, W., determination of uranium and thorium with 8-hydroxyquinoline, A., 1415.

Hecht, G., and Eichholtz, F., pharmacological analysis of careinoma metabolism, A., 594.

Hecht, O. See Riesenfeld, E. H. Heck, A. F., nature of the nitrogenous compounds in fungous tissue and their decomposition in soil, B., 258.

determination of total carbon and also of the carbon dioxide evolved from soils, B., 905.

Heck, L. L. See Gilman, H.

Heckendorn, A., quinoxalines from camphorquinone and aromatic

o-diamines, A., 331. Heckert, W. W., and Mack, E., jun., thermal decomposition of gaseous ethylene oxide, A., 1243.

Heczko, T., determination of silicon, A., 900.

potentiometric determination of iron with permanganate solution, A., 1260.

rapid potentiometric determination of nickel, A., 1415. Hedestrand, G., calculation of molecular polarisation of dissolved

substances at infinite dilution, A., 647. Hedgepeth, L. L., Olsen, N. C., and Olsen, W. C., ohlorinated

copperas—a new coagulant [in water purification], B., 76. Hedges, E. S., cause of periodic phenomena in electrolysis, A., 775.

periodic and spiral forms of crystallisation, A., 869. periodic structures from interacting gases, A., 1154.

Hedges, J. J., fading of dyestuffs on textile fabrics. II. Influence of regain. III. Influence of temperature. IV. General, B., 92. Hediger, S., resorption of carbon dioxide through the skin, A., 713.

Hédon, L. See Granel, F.

Hedvall, J. A., loosening, electrical conductivity, and reactivity of the crystal lattice, A., 20.

Hée, A., influence of cold periods on the respiration of plants, A., 1345.

Heenan & Fronde, Ltd., and James, A. E. W., refuse destructors, (P.), B., 662.

Heenan & Froude, Ltd., and Walker, G. H., conditioning of air for ventilation, (P.), B., 544.

Heenan & Froude, Ltd., and Wareham, R. C., separators [for town's refuse], (P.), B., 152.

Heeres, P. A., and Vos, H., fructosuria, A., 1100. Heftier, V. R., assembling of filter stack units, (P.), B., 839.

Hegan, H. J. See Courtaulds, Ltd. Hegel, G. W. See General Electric Co. Heid, J. L. See Skinner Manut. Co.

Heide, C. von der, and Hennig, K., detection of fruit wine in wine by identification of dibenzylidenesorbitol, B., 574.

Werder's method for the detection of fruit wines in grape wines, B., 735.

Heide, C. von der, and Mändlen, H., occurrence of invertase in must and wine, B., 618.

Heidelberger, M., Avery, O. T., and Goebel, W. F., "soluble specific substance" derived from gum arabic, A., 1201.

Heidelberger, M., and Kendall, F. E., reaction between proteins

and diazotised aromatic amines in neutral solution, A., 1473. Heidelberger, M. See also Jacobs, W. A. Heideman, M. L. See Bulger, H. A.

Heidenhain, W. See Eisen- & Stahlwerk Hoesch A.-G. Heidepriem, C. See Weber, H.

Heidlberg, T. von. See Krauss, F.

Heiduschka, A., and Lindner, H., ergosterol content of yeast, A., 607.

Heiduschka, A., and Munds, E., effluent water of cellulose manufacture, B., 125.

Heiduschka, A., and Muth, F., determination of fat in cocoa products, B., 34. nicotine in tobacco. III., B., 869.

Heiduschka, A., and Reymann, C., butyric acid fermentation,

Heiduschka, A., and Warlimont, A., bleaching of flour, B., 954. Heigham, C., animal feeding and brewery by-products, B., 337. Heijden, J. H. van der. See Pieters, H. A. J. Heijkenskjöld, G. O. W., and Aktiebolaget Bästa, yeast and its

manufacture, (P.), B., 414.

Heike, W., and Kessner, H., structure of gold-nickel alloys,

A., 1138.

Heike, W., and Westerholt, F., gold alloy "750/2"; behaviour after cold-drawing and heating, B., 99.
Heilbron, I. M., manufacture of [antirachitic] foodstuffs and

medicines, (P.), B., 911.

Heilbron, I. M., and Hill, R., interaction of ethyl acetoacetate with distyryl ketones. IV. Selective addition to unsymmetrical chlorodistyryl ketones, A., 69.

Heilbron, I. M., and Irving, F., intermolecular condensation of styryl ketones. III. Further examples of the ready form-

Heilbron, I. M., Johnstone, F., and Spring, F. S., sterol group. VI. Dihydroergosterol and the formation of isomerides, A., 1442. Heilbron, I. M., Owens, W. M., and Simpson, I. A., unsaponifiable matter from oils of clasmobranch fish. V. Constitution of

squalene as deduced from its degradation products, A., 789. Heilbron, I. M., and Sexton, W. A., occurrence of orgosterol in

phytosterols, A., 694. sterol group. III. Acetylation and catalytic hydrogenation of

ergosterol, A., 809.
sterol group. VII. Isolation of zymosterol, A., 1443.
Heilbron, I. M., Sexton, W. A., and Spring, F. S., sterol group.

IV. Existence of isomeric ergosterols, A., 809.

Heilbron, I. M., and Thompson, A., unsaponifiable matter from oils of elasmobranch fish. VI. Constitution of squalene as deduced from a study of the decahydrosqualenes, A., 790.

Heilingötter, R., determination of paraffin hydrocarbons in commercial benzol and motor spirits, B., 311.

Heilingötter, R. See also Wolf, H.

Heilmann, R., pyrazolines and their derivatives, A., 1183. Heilmann, R. See also Locquin, R.

Heilmeyer, L., behaviour of Congo-red to serum-colloids; determination of blood by the Congo-red method of Griesbach, A., 1325.

Heilmeyer, L., and Sturm, A., excretion of iodine by the gastric glands, A., 1098.
Heilperin, P. S. See Seka, R.

Heim, O., cobalt determination in driers, japans, alloys, etc., B., 690, 826\*

determination of formaldehyde in a pharmaceutical preparation, B., 795, 870.

Heimann, H., base combination and base exchange with humic acids, B., 766.

Heimann, H. See also I. G. Farbenind. A.-G.

Heimsoth, A., and Heimsoth & Vollmer Ges.m.b.H., tunnel kilns, (P.), B., 799.

Heimsoth & Vollmer Ges.m.b.H. See Heimsoth, A.

Hein, F., mechanism of the abnormal salt formation of chromium pentaphenyl hydroxide and a peculiar hydrogen union with chromium tetraphenyl salts, A., 835.

Hein, F., and Daniel, W., rapid absorption of hydrogen by solutions of permanganate containing silver, A., 1020.

Hein, F., and Markert, E., chromium triphenyl, chromium tetraphenyl, and thallium diethyl, A., 84.

Heinbecker, P., metabolism of Eskimos, A., 210.

Heindl, R. A., and Mong, L. E., preparation of experimental sagger bodies according to fundamental properties, B., 1044.

Heindl, R. A., and Pendergast, W. L., progress report on investigation of fireclay bricks and the clays used in their preparation, B., 979.

Heine, mud fertiliser from sewage fields, B., 757. dredger-mud as fertiliser, B., 906.

Heinecke, W., making of negatives, (P.), B., 454.

Heinrich, F., two laboratory rotating furnaces, A., 786. Heinrich, F., and Petzold, F., tantalum as a constructional material for chemical apparatus, B., 99.

high-vacuum grease, B., 102.

Heinrich, F., and Petzold, F. [with Schuth, E.], determination of the sulphur content of gases, especially of coke-oven gas, B., 231.

Heinrich, F. See also Müller, Erich.

Heinrich, H., sodium salts, used in conjunction with potash, as a plant food, B., 31.

Heinrich, R. See Siemens Schuckertwerke G.m.b.H. Heinsen, A. Seo Terres, E. Heinsohn, E. I., and Glascote Co., heat-exchanging coil, (P.),

Heintz, L., titration [of worts and beers] by stages, B., 994. Heinz, W., colorimetric determination of cobalt, A., 1414.

Heinzel, A. See Tammann, G.

Heinzmann, R. C., reconditioning iron and steel drums, (P.), B., 562.

Heise, K. See Berl, E.

Heisig, G. B., temperature regulator for Carius furnaces,  $\Lambda$ ., 167. Heisig, G. B., and Lauer, W. M., [preparation of] ammonium aurintricarboxylate, A., 1070.

Heisler, C. L. See Brit. Thomson-Houston Co., Ltd. Heitler, W., group-theory of the reciprocal action of atoms, A., 117.

electron exchange and the formation of molecules, A., 492. quantum theory of valency, A., 982.

Heitler, W., and Herzberg, G., spectroscopic confirmation of the quantum-mechanical theory of homopolar linking, A., 629. does the nitrogen nucleus conform with the Bose statistics?, A., 1127

Heitmann, M.J., production of lubricants containing water, (P.), B., 805\*.

Hejda. Sec Labbé, M.

Hekma, E., is fibringen in natural plasma present in the free stato or as a complex ?, A., 1095.

existence, in plasmatic liquids, of fibrinogen-containing complexes together with free fibrinogen, A., 1095.

Hektoen, L., and Cole, A. G., proteins in egg-white and their relationship to the blood-proteins of the hen as determined by the precipitin reaction, A., 340. proteins of egg-white. II. Transformation of crystallised

ovalbumin into non-crystallisable conalbumin, A., 1492.

Hektoen, L., and Schulhof, K., immuno-chemical investigations on globin and globin derivatives, A., 340.

Helberger, H. Seo Fischer, Hans.

Helbig, M., earth cementation by iron and manganese or by alumina and lime, A., 169.

Heldring & Pierson. See Pierson, H. D.

Helfenstein, A. See Karrer, P. Helfer, J. See Grube, G.

Helferich, B., and Du Mont, H., compounds of dextrose and phosphoric acid, A., 683.

Helferich, B., and Gootz, R., fluorine derivatives of carbohydrates, A., 1427

Helferich, B., and Himmen, E., new dicarbonyl sugars, A., 1280. Helferich, B., and Leete, J. F., triphenylmethyl ether of mannose; new tetra-acetylmannose, A., 912. Helferich, B., and Schaefer, W., [preparation of] n-butyrylchloride,

A., 1040.

Helfgat, G. I. See Sterkin, E. G.

Helge-Petersen, influence of temperature on the composition of the upper layers of the atmosphere, A., 419.

Hell, J., process for tanning hides and skins, (P.), B., 369.

Hellemann, H., and Zahn, H., dielectric constants of solutions of electrolytes, A., 12. Heller, A. See Leuchs, H.

Heller, G., cyclic N-hydroxy-compounds and N-oxides, A., 578. Heller, G., Herrmann, H., and Spielmeyer, G., succinic acid derivatives from acylphenylacetonitrile, A., 66.

Heller, G., and Lauth, H., isatide or isatinpinacol, A., 451. Heller, G., Mertz, E., and Siller, A., oxidising nitration and quin-

onenitronic acids, A., 701.

Heller, G., Mertz, E., and Siller, A., oxidising nitration and quinonenitronic acids, A., 701.

Heller, G., and Siller,  $\Lambda$ ., a- and  $\beta$ -isatol, A., 1315.

Heller, H., manufacture of [linseed] oil for lead-whites, B., 63. Baudouin's sesamé oil reaction, B., 103.

Heller, J., urea content of frog muscle, A., 1102. Heller, K., determination of halogen by Gasparini's method, A., 528.

micro-determination of sulphur, phosphorus, and arsenio in organic compounds by Gasparini's method, A., 948. Heller, K. [with Hora, F., and Willingshofer, K., [determination of halogen [in perchlorates] by Gasparini's method. II., A.,

Heller, K. [with Sturm, H.], arylamides of aromatic carboxylic and sulphonic acids, A., 826.

Heller, K., and Fleischhans, Z., determination of arylamides of

aromatic sulphonic acids, A., 1324.

Heller, K., and Krumholz, P., systematic spot-analysis. I., A., 900.

Heller, L., [soil] reaction experiments with mustard and oats in connexion with nutrient-requirement trials, B., 370.

Heller, O., plant for utilising the sensible heat of hot coke, (P.), B., 548\*

Heller, W., velocity coefficient of kinetic processes in heterogeneous systems as a function of temperature and intensity of agit-

ation, A., 150. possibility of characterising kinetic processes in heterogeneous systems by a single stirring factor, A., 1150.

Hellmann, H., occurrence of ions in the decomposition of ozone and the ionisation of the stratosphere, A., 1211.

Hellmann, R., preparation of tertiary a-hydroxy-acids, A., 1041. Hellriegel, E. See Herzog, R. O., Hillmer, A., and Traube, W. Hellriegel, W. See Blumann, A.

Hellström, H. See Euler, B. von, and Euler, H. von.

Hellthaler, T. See I. G. Farbenind. A.-G., and Riebeck'sche Montanwerke A.-G., A.

Hemedes, E. D. See Lava, V. G.

Hemmecke, E. See Fries, K. Hemmings, F. C., Lamb, B. A., and Lamb, M. C., removal of chromium salts from leather, B., 295.

Hemmingsen, T. V., filter for fine filtering of fluids, especially fuel oils, (P.), B., 801.

Hempel, H., and Murnseer, E., pigment for heat- and acid-resistant paints, (P.), B., 255.

Hencky, H., what circumstance conditions the solidification in the plastic deformation of solid isotropic bodies? A., 989. Henderson, B. W., Percival, J. G., and Imperial Chemical Indus-

tries, Ltd., manufacture of aromatic acid chlorides, (P.), B., 636. Henderson, G. G., McCrone, R. O. O., and Robertson, J. M., caryophyllene series. II. Clovene and isoclovene, A. 931.

Henderson, G. H., condensation of radioactive substances on

solid surfaces, A., 1124.

Henderson, H., Glasgow, J. G., and Gulf Refining Co., heat exchanger, (P.), B., 837.

Henderson, H. B., and Caldwell, J. H., increase in refractoriness in ceramic bodies in interrupted heat treatment, B., 129.

Henderson, J. E., and Laird, E. R., reflexion of soft X-rays, A., 14. Henderson, L. J. See Dill, D. B., Edwards, H. T., and Hochrein, M.

Henderson, L. M., Ferris, S. W., and McIlvain, J. M., sp. heats of mineral oils, B., 768.

Henderson, L. M. See also Ferris, S. W.

Henderson, S. T., quinoxaline synthesis; derivatives of 2:3-di-

methylquiuoxaline, A., 580.

Henderson, W. N., and Solvay Process Co., exploitation of gases containing nitrogen, hydrogen, and carbon dioxide, (P.), B.,

Hendler, L., and United States Secretary of War, igniting mixture for [pyrotechnic] tracer compositions, (P.), B., 539.

Hendrick, J., conditions of nitrification [in soil], B., 259. Hendrick, J., and Newlands, G., mineral composition of the soil as a factor in soil classification, B., 258.

Hendrick, J., and Welsh, H. D., substances removed by the drainage from a Scottish soil, B., 258.

Hendricks, S. B., crystal structure of monocthylammonium bromide and iodide, A., 18.

crystal structure of monomethylammonium halides, A., 18. crystal structure of n-monopropylammonium halides, A., 125. crystal structure of triethylammonium halides, A., 126.

crystal structure of n-butyl-, amyl-, hexyl-, and heptyl-ammonium halides, A., 495.

crystal structure of lithium chloride monohydrate, A., 747.

Hendricks, S. B., and Albrecht, W. H., röntgenographic and chemical investigations of oxides of iron and cobalt, A., 15.

Hendricksen, H. C., pincapple, A., 1113. Hendrickson, A. H. See Veihmeyer, F. J

Hendrickx, J. A., and Société Anonyme Établissements Poliet & Chausson, industrial manufacture of artificial Portland cement, (P.), B., 898\*.

Hendriksz, R. D., and Reclaire, A., determination of ionone, B.,

Hendry, J. See Bickford & Sons, Ltd., A. M. Hendry, W. F. See Manhattan Electrical Supply Co. Henecka, H. Sec Müller, E.

Hengl, F., and Reckendorfer, P., relationship of sulphur content of soils and plants, B., 142.

Henglein, F. A. See I. G. Farbenind. A.-G. Hengstenberg, J., X-ray investigation of polymerised cyclopentadienes, A., 54.

structure of the carbon chain in hydrocarbons  $C_nH_{2n}$ , A., 750. Hengstenberg, J., and Mark, H., röntgenographic detection of lattice disturbances in metals, A., 868. Hengstenberg, J. See also Mie, G.

Hening, J. C., and Dahlberg, A. C., effect of certain salts on the

physical properties of ice cream mixes, B., 795. Henius, K, and Weiler, G., distribution of gold in the organs of healthy and tuberculous rabbits following administration of gold preparations. II. Tuberculous rabbits, A., 1483.

Henkel, E. See General Electric Co.

Henkel & Cie. G.m.b.H., manufacture of soap, (P.), B., 825. manufacture of dry colour-binding agents soluble in cold water, (P.), B., 1027. manufacture of dry halogen-calcium-starch preparations, (P.),

B., 696.

Henkel & Cie. G.m.b.H. See also Riehl, E.

Henke-Stark, F. See Stollé, R.

Henley, A.  $\dot{T}$ ., standards for Gutzeit test [for arsenic], B., 94.

Henley, F. R. See Harden, A. Henley, W. J. R., and Sugden, S., parachor and chemical constitution. XI. Arsenic and selenium compounds, A., 983.

Henley's Telegraph Works Co., Ltd., W. T., and Judge, E. E., [apparatus for]lead-covering of electric cables, etc., by extrusion, (P.), B., 401.

Henley's Tyre & Rubber Co., Ltd., and Traxler, J., heat-insulating material, (P.), B., 458.

Henne, A. L., laboratory ozoniscr, A., 1261.

Henne, A. L. See also Midgley, T. jun. Hennen, E. C., and United States Nito Co., Inc., motor fuel, (P.),

B., 348. Hennig, C. T., desulphurisation of steel, (P.), B., 686.

Hennig, H. See Weygand, C.

 Hennig, K. See Heide, C. von der.
 Henri, V., and Wolff, F., formation, pre-dissociation, and dissociation of molecules determined by vibration spectra; sulphur monoxide, A., 974.

Henri, V. Sce also Errera, J. Henrich, F., and Herold, W., orccin-like dyes. II., A., 71.

 Henriksen, E. See Chen, K. K.
 Henriques, V., and Okkels, H., histochemical investigations on the behaviour of various iron compounds in the organism, A., 1103. Henriques, V., and Roche, A., is the iron content of milk increased

by the ingestion or injection of iron salts? A., 1099.

Henriques, V., and Roland, H., iron metabolism, A., 93. Henry, I. W., and Ionizing Corporation of America, ionisation and hydrogenation of hydrocarbon starting material, vapour, and oil; dissociation of hydrocarbon fluids and solids for production of gases and liquids of lighter mol. wt., (P.), B., 506. Henry, L. See Pinkus, A.

Henry, L. D., and Marshall, M. S., stability of carbohydrate media, A., 101.

Henry, R. W., Streeter, E. D., and Gulf Refining Co., production

of thickened lubricating oil, (P.), B., 234. Henry, V. S., Wright, A., Young, F. W., and Filtration Engineers, Inc., treatment [dying] of finely-divided solids, (P.), B., 928. Henschel, H., nucleoprotamine and its components in animal

metabolism, A., 719. Henshaw, D. M. See Cooper, C.

Hensing, J. C., and Naamlooze Vennootschap Nederlandsche Kunstzijdefabriek, spinning bowls or boxes for artificial silk, (P.), B., 514.

Hentrich, W., and General Aniline Works, Inc., carboxylated N·ω·aminoalkylaminonaphthalenes, (P.), B., 889\*.

Hentrich, W. See also Grasselli Dyestuff Corp., and I. G. Farbenind. A.-G.

Hentschel,  $H_{\cdot \cdot}$ , and Zoeller,  $E_{\cdot \cdot}$ , metabolic changes in rickets. I. Phosphate metabolism in the musculature in experimental rickets in rats, A., 717.

Hentschel, H. See also Ayrer, E., and Müller, Erich.

Henville, D., detection, determination, and oxidation of sulphur dioxide [in foods], B., 415.

Henville, D., and Paulley, W. M., dyes as an indication of adulteration in butter, B., 697.

Henze, M., tyramine and tyrosine content of the salivary glands of cephalopods; micro-determination of these two substances, A., 839.

Henzi, E. See Ruggli, P.

Hepburn, J. R. I., Liesegang rings as a periodic coagulation phenomenon, A., 258. Hepburn, W. M., and Surface Combustion Co., control of com-

bustion, (P.), B., 547.

Hepburn, W. M., Weaver, E. W., and Surface Combustion Co., Inc., annealing furnace, (P.), B., 724.

Hepner, B., manufacture of water-soluble, complex organic bismuth compounds, (P.), B., 37. Hepner, F. See Beumer, H.

Herasymenko, P., Kučera's anomalies in electrocapillary curves, A., 653.

Herasymenko, P., Heyrovský, J., and Tančakivský, K., maxima on the current-voltage curves. III. Electrolysis of mercury salt solutions with dropping and steady mercury cathodes, A., 514.

Herbert, (Sir) A., and Lloyd, A. H., hardening of tool steels, (P.), B., 944.

Herbert, E. G., machinability [of metals], B., 132.

hardness testing and hardening of metals, (P.), B., 216. hardening of superhardened steel by magnetism; lattice reson-

ance hypothesis, B., 818. Herbert, F. K., and Groen, J., distribution of reducing substances between plasma and corpuscles; a comparison of various bloodsugar methods, A., 837. Herbert, I. M. See Hudson, O. F.

Herbst, H., oil-testing apparatus, B., 546. Herbst, K. See Meber, P. W.

Hercules Powder Co., and Langmeier, A., refining of rosin, (P.), B., 610.

Hercules Powder Co., and Milliken, M. G., digestion of nitrocellulose, (P.), B., 113.

nitration of cellulose, (P.), B., 304. Hercules Powder Co., and Peters, G. H., [production of] nitrated carbohydrate solutions [cellulose nitrate lacquers], (P.), B.,

Hercules Powder Co., and Rile, J. H., floor covering, (P.), B., 435.

Hercules Powder Co., and Stoops, B. I., blasting explosive, (P.), B., 912\*.

Hercules Powder Co. See also Bent, L. M., Jenks, G. E., Kaiser, H. E., Reids, E. E., Shimer, A. A., and Symmes, E. M. Herd, C. W. See Kent-Jones, D. W. Hereward, H. W., Hooley, L. J., Thomas, J., and Scottish Dyes,

Ltd., production of benzoic acid derivatives [reduction of halogenated nitrobenzoylbenzoic acids], (P.), B., 672.

Herget, L. See Endres, G. Hering, M. See Lorenz, R.

Hérissey, H., and Chalmeta, A., determination of reducing sugars in presence of hydrocyanic acid, A., 797\*.

Herisson, J. E. R., crystallisers for sugar manufacture, (P.), B.,

Herites, J., gelatinising power of soaps, B., 785.

Herman, H., hyperglycamia following injection of secretin, A.,

Hermann, C., calcium carbide lattice, A., 747.

Hermann, S., Bacterium gluconicum, occurring in "Kombucha" (Japanese or Indian tea fungus), A., 473. Hermann, S., and Pharmaceutische Werke "Norgine" Akt.-

Ges., production of pills and pastilles for the small intestine, (P.), B., 698.

Hermanowicz, E. See Jabiczyński, K. Hermansen, A. See Comp. Réunies des Glaces et Verres Spéciaux du Nord de la France.

Herminghaus & Co. G.m.b.H., desulphurising artificial products made from viscose, (P.), B., 1011. treatment with liquids of [twisted] artificial threads prepared

from cellulose solutions, (P.), B., 1013.

Hermsdorf, L. G., See Baumert, P. Hernández, F., Jaumá, J., and Verderau, L., ionone, A., 68. Herndon, L. R., and Reid, E. E., decomposition of organic compounds at high temperatures and pressures, A., 46. Hernler, F., three isomeric 1-tolyl-3:5-dimethyl-1:2:4-triazoles

and their salts, A., 828.

simultaneous determination of nitrogen and mercury in the microchemical analysis of organic mercury compounds, A.,

Hernler, F., elementary organic analysis by Pregl's microchemical method, A., 1323.

triazoles, X. Oxidation products of the three 1-tolyl-3:5-

dimethyl-1:2:4-triazoles, A., 1465. Hernler, F., and Bruns, T., linear pentacene series. XVI. Pentacene-5:7:12:14-diquinonedisulphonic acid and tetrahydroxy-

pentacene-5:7:12:14-diquinone, A., 1453. Hernler, F., and Schnürch, K., linear pentacene series. XIV. Pentacene-6:13-quinone, A., 1453. Hernler, F., and Sommer, O., linear pentacene series. XV. 6:13-

Dihydroxypentacene-5:7:12:14-diquinone, A., 1453.

Herold, V., secondary [alkaline] electric batteries, (P.), B., 824. Herold, W. See Henrich, F., and Wolff, K. L.

"Herold" Akt.-Ges., manufacture of plates from resins, etc., [reinforced by metal sheets], (P.), B., 786. Herr, E. F. See Wright, S. L., jun.

Herre, A. See Grasselli Dyestuff Corporation.

Herrera, L. A., imitation of organic forms by means of albumin and hydrofluoric acid, A., 90.

imitation of organic forms by means of albumin and mineral acids, A., 208.

imitation of organic forms by means of albumin, A., 462. Herrick, H. T., May, O. E., and United States, manufacture of gluconic acid, (P.), B., 867.

Herring, P. H. See Auld, S. J. M. Herrington, B. L. See Johnson, A. H.

Herrly, C. J., Matheson, A. M., and Niacet Chemicals Corporation, material for tanning and its manufacture, (P.), B., 568.

Herrmann, H. See Heller, G.

Herrmann, J. D., Dennis, W., and Dedrick, D. D., use of mercurochrome and modified mercurochrome as biological stains, A., 839. Herrmann, K., and Burak M., X-ray examination of o- and

m-nitroaniline, A., 18. Herrmann, K. See also Büssem, W., and Dworzak, R.

Herrmann, L., controlling the thickness of electrolytic deposits. (P.), B., 135.

Herrmann, O. See Grasselli Dyestuff Corporation.

Herrmann, Oskar. See Abderhalden, E.

Herrmann, W. O., Haehnel, W., and Consortium für elektrochemische Industrie, production of polymerised vinyl acetate, (P.), B., 512\*

Herrmann, W. O. See also Consort. f. elektrochem. Ind. G.m.b.H. Herrmann, Z., separation of calcium and magnesium by the oxalate method, A., 1159.

Herroun, E. F., and Wilson, E., ferromagnetic ferric oxide, A., 160. Hershey, J. M., and Orr, M. D., removal of glycogen from living muscle. V., A., 467. Hersohn, W. W. See Kilduffe, R. A.

Herszhein, S. See Fichter, F. Herszfinkiel, H., isobaric elements, A., 234.

behaviour of the radio-active deposit during the operations used for the removal of emanation from water, A., 371.

abnormally high heat production with the thorium mineral orangite, A., 1137.

Herszfinkiel, H., and Jedrzejovski, H., conditions of formation of groups of radio-active atoms, A., 620.

Hertel, E. [with Rissel, E., and Riedel, F.], stability and molecular volume of organic groups in molecular compounds, A., 380.

Hertel, O. H., distillation of carbonaceous material, (P.), B., 971\*. Hertel, R. H. See Ostwald, Wolfgang. Herthel, E. C., Pelzer, H. L., and Sinclair Refining Co., cracking

of heavier hydrecarbon oils, (P.), B., 465.

cracking of hydrocarbons, (P.), B., 548.

cracking of hydrocarbons and hydrocarbon oils, (P.), B., 883. Herthel, E. C., and Sinclair Refining Co., cracking of hydrocarbon oils, (P.), B., 933\*. Herthel, E. C. See also Sinclair Refining Co.

Hertlein, H. F., diffraction of X-rays in liquids and liquid mixtures, A., 629.

Hertwig, R., and Hicks, J. S., gasometric determination of carbon dioxide [in baking powders, flours, etc.] by the Chittick method, B., 187.

determination of degree of acidity of flours by colorimetric spot-test, B., 657.

Herty, C. H., jun., coalescence of non-metallic inclusions in steel B., 248.

Herty, C. H., jun., and Fitterer, G. R., the system ferrous oxidesilica, B., 170.

physical chemistry of steel making; deoxidation with silicon and the formation of ferrous silicate inclusions in steel, B., 475.

Herty, C. H., jun., Fitterer, G. R., and Eckel, J. F., physical chemistry of steel making; Dickenson's method for the determination of non-metallic inclusions in steel, B., 475.

Hertz, A., chronic mercury poisoning, A., 1487.

Hertz, G. L., and Naamlooze Vennootschap Philips' Gloeilampenfabrieken, manufacture of oxide cathodes, (P.), B., 783\*. electric discharge tube, (P.), B., 859.

Hertz. W., molecular refraction and number of molecules in unit

volume, A., 491.

entropy and heat of evaporation, A., 509.

entropy and specific heat of solid inorganic compounds, A., 1137.

Hertzell, E. A. See Hall, R. E. Hertzman, A. B. See Gesell, R.

Hervath, A. A., yeast feeding and blood-constituents of hens, A., 207.

Hervé, L., preparation of a paper film for negatives and positives, B., 959.

Hervey, J. See Bergmann, E.

Herviaux. See Vincent.

Herz, H. See Avenarius, H.

Herz, R., Schulte, F., and General Aniline Works, Inc., manufacture of nuclear-substitution product of 1-aminonaphthalene-8-carboxylic acid in the open or anhydride form, (P.), B., 973\*.

Herz, R. See also Grasselli Dyestuff Corporation.

Herz, W., fused salts. III., A., 23. density and temperature. VII., A., 252.

entropy and vibration number of elements, A., 266.

variation of density and refractive index [of liquids] with the

temperature, A., 634. specific heats of] solid elements, A., 754.

limiting volume of molecules, A., 993.

dependence of surface tension and latent heat of vaporisation on the density and temperature up to the critical temperature, A., 1001.

zero volume of metal alkyls, A., 1137.

Herz, W., and Hiebenthal, F., influence [of alkali and alkalineearth halides] on solubility, A., 256.

Herz, W., and Levi, (Miss) M., physico-chemical measurements of azeotropic mixtures, A., 1228.

Herz, W., and Lorentz, E., physico-chemical investigation of dioxan, A., 499.

Herz, W., and Lorenz, L., dependence of adsorption of a dissolved substance on the properties of the solution and the solvent,

Herzberg, G., new band system in carbon monoxide, A., 118. band spectra of carbon monoxide in the electrodeless discharge,

structure of diatomic molecules, A., 1367.

Herzberg, G. See also Heitler, W. Herzberg, W., effect of temperature on the strength of bagpaper, B., 1010.

[test for] paper constituents injurious to metals, B., 1010. Herzberg, W., Hoppe, G., and General Aniline Works, Inc., [manufacture of] thiazole derivatives of 1:4-naphthaquinone, (P.), B., 846\*.

Herzfeld, E., determination of cholesterol [in blood], A., 1326. Herzfeld, K. F., heat of adsorption of gases by solids, A., 1376.

Herzner, R., water-soluble protein in wheat seed, A., 107. Herzig, A. J. See Baker, E. M. Herzog, E. See Deuts. Gold- & Silber-Scheideanstalt vorm.

Roessler.

Herzog, G., influence of atmospheric moisture on the properties of fibres and the measurement of atmospheric moisture, B., 1010.

Herzog, H. See Thiecke, J.

Herzog, R. O., [structure of silk fibroin], A., 85.

constitution of substances of high mol. wt., A., 794.

Herzog, R. O., and Hillmer, A. [with Paersch, E., and Hellriegel, E.], lignin. II., A., 915.

Herzog, R. O., and Jancke, W., röntgen diagrams of cellulose, A., 245.

deformation of fibrous materials, A., 383.

Herzog, R. O., and Krüger, D., cellulose nitrate diffusion experiments, A., 394.

Herzog, R. O., and Lange, B., characterisation of colloidal solutions by the degree of polarisation of Tyndall light, A., 505. Herzog, R. O., and Reich, W., behaviour of polysaccharides in solutions. I. Solution of glycogen in resorcinol, A., 544.

Herzog, R. O., and Weissenberg, K., thermal, mechanical, and X-ray analysis of swelling, A., 137.

Hesemann, J. See Jakob, J.
 Heskamp, P., and Vereinigte Stahlwerke, Akt.-Ges., working of blast furnaces, (P.), B., 563\*.

Hess, F. G. See Bogert, M. T.

Hess, K., formation of plant membranes, A., 361.

[lignin and cellulose], A., 684. mol. wt. of cellulose, A., 763.

dispersity of dissolved cellulose, A., 878.

Hess, K., and Smith, Franklin A., starch. II. Potato starch, A., 914. Hess, K, and Trogus, C, reversible and irreversible lattice changes of cellulose triacetate; X-ray investigations of cellulose derivatives. III., A., 1222.

Hess, K. See also Trogus, C

Hess, V. F., mean life-period of ions in the air above the sea, A., 114. Hesse, E., therapy of mercury poisoning, A., 1337.

Hesse, E., and Gehe & Co. Aktien-Gesellschaft, production of narcotics, (P.), B., 189.

Hesse, E., and Taubmann, G., effect of diguanide and its derivatives on sugar metabolism, A., 956.

Hesselburger, W., proteins of different barleys and pasteurisation turbidities, B., 759.

Hessenbruch, W., determination of gases in metals, B., 287. determination of gases in metals, particularly of oxygen in steel, B., 358.

Hessenbruch, W. See also Lorenz A.-G., C., and Oberhoffer, P. Hessle, E. T., continuous process for the refining [cracking] of oils, (P.), B., 314.

refining of [hydrocarbon] oil, (P.), B., 386.

Hessling, G. von. See Reihlen, H.
Hessling, W., preparation of agglomerated solid carbon dioxide, (P.), B., 1015.

Hettche, O. See Wieland, H., and Wrede, F. Hettich, A. See Schleede, A.

Hettner, G., and Simon, F., infra-red spectra of ammonium salts in the transition region, A., 119.

Hetu, J. A., retary [gyratory] crusher heads or the like, (P.),

B., 458.

Heubner, W., behaviour of plants after treatment of the seed with mercury, A., 612.

Heubner, W., and Holtz, F., biological inactivity of ergosterol peroxide, A., 1345. Heubner, W. See also Meyer, Erich.

Heuck, C. See I. G. Farbenind. A.-G.

Heuckeroth, A. W. van. See Gardner, H. A. Heuer, R. P., prevention of disintegration of blast-furnace linings,

B., 209. Heuer, R. P., and General Refractories Co., [refractory] brick and

cement for furnace use, (P.), B., 646.

Heuer, R. P. See also Lukens, H. S. Heukelekian, H., losses caused by heating liquefied sewage solids, B., 455.

composition and decomposition of fresh sewage solids collected

from different parts of a settling tank, B., 738. Heupke, W., application of Grossfeld's method for the determination of fat to fæces, A., 464. microscopical differentiation of neutral and hydrolysed fat,

A., 478.

Heumann, J. See Thiessen, P. A. Heuse, W., and Otto, J., limiting values for the expansion and pressure coefficients of helium, hydrogen, and nitrogen, A., 1226. Heuser, H., and United States Process Corporation, manufacture

of beverages, (P.), B., 697. manufacture of fermented beverages of reduced alcohol content,

(P.), B., 834. cereal beverage and liquid, (P.), B., 954.

Heuser, H. See also Kötigen, P. Heuser, R. V., and American Cyanamid Co., manufacture of

diphenylguanidine, (P.), B., 916. Heusler, F., copper alloy, (P.), B., 133. Heusner, K. See Grasselli Dyestuff Corporation.

Hevesy, G. von, electrical conductivity as a criterion of type of combination, A., 143. Hevesy, G. von, Alexander, E., and Würstlin, K., niobium:tantalum

ratios of titanium minerals, A., 1036. Hevesy, G. con, and Biltz, M., kinetic phenomena at metallic

surfaces, A., 759. Hevesy, G. ron, and Seith, W., diffusion velocity of silver in silver telluride, antimonide, and stannide, A., 638.

use of radioactive recoil atoms for diffusion measurements, A., 1124.

Hevesy, G. von, and Würstlin, K., ratios of zirconium to hafnium and niobium to tantalum in minerals, A., 288.

Hevesy, G. von. See also Brönsted, J. N

Hevi Duty Electric Co., and Smalley, E. L., [mounting for heating elements of] electric resistance furnaces, (P.), B., 564. Hewetson, H. E., and Standard Oil Development Co., distillation

of petroleum, (P.), B., 120.

Hewitt, A. See Hewitt (Darlaston), Ltd.

Hewitt, E. R., apparatus for centrifugal purification of metals and the like, (P.), B., 525.

Hewitt, L. F., hormones of the anterior pituitary lobe, A., 1201.

Bence-Jones proteins, A., 1482. Hewitt, L. F. See also Marrack, J.

Hewitt (Darlaston), Ltd., and Hewitt, A., compositions for road making, etc., (P.), B., 1017.

Hexel, K. See Kailan, A. Heyde, W. See Grassmann, W.

Heyl, F. W., Wise, E. C., and Speer, J. H., unsaponifiable fraction

of spinach fat, A., 855. Heyl, F. W. See also Cole, V. V., Speer, J. H., and Wise, E. C. Heyl, G., alkaloids from Carnegia gigantea (Engelm.) Britt. and Rose (Cereus giganteus, Engelm.), A., 201.

Heyl, G. E., manufacture of non-splintering glass sheets, (P.), B., 519.

manufacture of compound sheets of glass and cellulose derivative compositions, (P.), B., 519, 645.

manufacture of non-splintering glass sheets [compounded with cellulose derivatives], (P.), B., 816.

Heyl, G. E., and Hycolite Liquid Wallpaper Manufacturing Co., Ltd., manufacture of linoleum, (P.), B., 254.

Heyl & Patterson, Inc. See Robb, L.J.Heylandt, C.W.P. See Ges. f. Industriegasverwertung m.b.H. Heyl-Beringer Farbenfabr. Akt.-Ges., heated drum apparatus for desiccating liquids and semi-liquids, (P.), B., 664.

Heymann, E., system colloidal ferrio hydroxide-hydrochloric

acid-water, A., 260.

equilibrium in the system colloidal ferric hydroxide-hydro-

chlorio acid-water, A., 643, 763. Heymann, W., disturbance of phosphate metabolism in rickets II. Excretion of endogenous phosphate. III. Blood-phosphate curves of rachitic and non-rachitic infants after

parenteral administration of organic and inorganic phosphate, À., 1331. effect of parenterally administered organic and inorganic phosphates in rickets, A., 1331.

Heymans, J. W., determination of cobalt in steel, B., 1045. Heymons, A. See Braun, J. von.

Heyn, A. See Vonk, H.J. Heyna, H. See Grasselli Dyestuff Corp. and Hoffa, E. Heynert, F. A. H., and British Bead Printers, Ltd., decorating the surface of textile materials, etc., (P.), B., 354.

Heyning, G. J. T., rapid filtration of syrup through sand, B., 371. Heynis, D., device for preventing the boiling over of liquids which produce foam when boiling, (P.), B., 665.

Heyroth, F. F. See Svedberg, T.

Heyrovský, J., and Berezický, S., deposition of radium and other

alkaline-earth metals at the dropping-mercury cathode, A.,

Heyrovský, J., and Šimunek, R., electrolysis with a mercury cathode. II. Explanation of the anomalies on the electrocapillary curves, A., 1241.

Heyrovský, J. Seo also Demassienz, (Mme.) N., and Herasymenko, P.

Heywood, F. See Collier, A. J. Hibben, J. H., removal of dissolved gases from liquids by vacuum sublimation, A., 1261.

Hibbert, (Miss) E., action of light on anthracene, B., 88. effect of light on coloured [cotton] fabric. III., B., 715.

Hibbert, H., and Carter, N. M., carbohydrates and polysaccharides. XVII. Isomeric methylidenc[methylene]glycerols, A., 47. carbohydrates and polysaccharides. XIX. Structural, geometrical, and optical isomerism of p-nitrobenzylideneglycerols

and their derivatives, A., 170.
mechanism of organic reactions. I. Wandering of acyl groups

in glyceryl esters, A., 791.

Hibbert, H., Houghton, E. O., and Taylor, K. A., carbohydrates and polysaccharides. XXI. Tendencies of saturated and unsaturated aldehydes towards acetal formation, A., 426.

Hibbert, H., Perry, S. Z., and Taylor, K. A.,  $aa'\beta\beta'$ -tetrabromoethyl ether and so-called "tetrabromobutaldehyde," A., 791.

Hibbert, H., and Sturrock, M. G., carbohydrates and polysaccharides. XVIII. p-Nitroberzylidene-glycols and -glycerols, A., 170.

Hibbert, H., and Whelen, M. S., carbohydrates and polysac-charides. XXII. Isomeric cinnamylideneglycerols, A., 446.

mechanism of organic reactions. II. "Non-existence" of a migratory methyl group in the conversion of glyceryl dichlorohydrin into monomethyl glyceryl ether, A., 908. carbohydrates and polysaccharides. XXIII. Synthesis and

properties of hydroxyalkylidene-glycols and -glycerols, A., 1421.

Hibbert, H., Whelen, M. S., and Carter, N. M., carbohydrates and polysaccharides. XX.  $\beta$ -Methyl glyceryl ether, A., 292.

Hibsch, J. E., quartz-porphyry and granite-porphyry from Teplitz,

Bohemia, A., 673.

Hickinbottom, W.J., glucosides. I. Formation of glucosides from 3:4:6-triacetylglucose 1:2-anhydride, A., 174. glucosides. II. Preparation of a-glucosides from β-glucosyl chlorides, A., 1167.

Hickman, K., sublimation mercury still, A., 418.

still for liquids of high b. p., A., 418.

Hickman, K. C. D., vacuum recording gauges, A., 903.

Hickman, T. A. See Powers, E. B. Hickman, T. M., manufacture of emulsions of bitumen or pitch for road-making, etc., (P.), B., 434.

Hicks, C. S., and Holden, H. F., absorption of ultra-violet light by oxyhæmoglobin and by some of its derivatives, A., 1476.

Hicks, J. F. G., corrosion of iron, B., 521. Hicks, J. S. See Hertwig, R.

Hicks, (Miss) M. M. See Washburn, E.

Hicks, W. M., nucleus as radiator, A., 1354.

Hickson, E. F. See Walker, P. H.
Hida, S. See Mnto, T.
Hidaka, Y., pityrol. VIII. Distillation of sucrose, A., 298.
Hidnert, P., thermal expansion of tantalum, A., 755.

Hiebenthal, F., chemical and petrological investigation of bituminous rocks of various ages from N. Germany, A., 905.

Hiebenthal, F. See also Herz, W. Hieber, W., and Leutert, F., reactions of oximes with metallic salts. III. Complex-chemical behaviour of stereoisomeric oximes, A., 1073.

Hieber, W., and Ries, K., constitution of compounds of metallic salts with p-phonylenediamine and benzidine, A., 691. mol. vol. of organic groups in complex salts. I. Volume of o-phenylenediamine in its compounds with metallic salts,

Hieber, W., Schlieszmann, C., and Ries, K., complex compounds of aromatic diamines; compounds of o-phenylenediamine with metallic salts, A., 691.

Hieber, W., and Sonnekalb, F., [iron carbonyls containing

pyridine], A., 412. Hieber, W., and Sonnekalb, F. [with Bader, G.], reactions and derivatives of iron carbonyl. III. Iron carbonyls containing pyridine, A., 41. Hiedemann, E., behaviour of various organic vapours in the high-

frequency glow discharge, A., 978.

Hiernaux, A. See Labbé, M. Hiers, G. S., and Hager, F. D., [preparation of] anisole, A., 1062.

Higab, M. A., three-dimensional motion of an electron in the field of a non-neutral atom, A., 368.

Higasi, T., fermentation products. IV. Relation of the acety group to fermentation, A., 1339.

Highy, W. M. See McCoy, E.

Higgins, E. B. See United Water Softeners, Ltd.

Higgins, R. See Hay, R. Higgins, W. F. See Kaye, G. W. C.

Higgs, A. J. See Bailey, V. A.
Highberger, J. H., and Moore, E. K., analysis of [tannery] beamhouse liquors, B., 486.

Highberger, J. H. See also McLaughlin, G. D.

Hijman, A. J. See Bergh, A. A. H. van den. Hijmans van den Bergh, A. A. See Bergh, A. A. H. van den. Hilbert, G. E., and Johnson, T. B., germicidal action of hydroxydiaryl sulphides, A., 806.

Hilbert, G. E. See also Johnson, T. B.

Hildebrand, J. G., jun. See Raiford, L. C.

Hildebrand, J. H., solubility. XII. Regular solutions, A.,

Hildebrand, J. H., compressibilities and thermal pressure coefficients of certain liquids, A., 1227.

intermolecular forces in liquids, A., 1373.

Hildebrand, J. H., and Sharma, J. N., activities of molten alloys of thallium with tin and with lead, A., 398.

Hildebrand, J. H., and Wachter, A., m. p. of normal paraffins, A., 1163.

Hildebrand, J. H. See also Dice, (Miss) M. E. Hildebrandt, F. M., adjustment of acidity of cane-molasses fermentations for maximum alcohol yields, B., 793.

Hildebrandt, H., mixing, emulsifying, homogenising, comminuting, etc., substances of all kinds, (P.), B., 800.

Hildebrandt, W., and Gasoline Corporation, condensation of vapours, (P.), B., 581.
Hilditch, T. P., and Jones, (Miss) E. E., fatty acids and com-

ponent glycerides of some New Zealand butters, B., 253. Hilditch, T. P., and Vidyarthi, N. L., products of partial hydrogen-

ation of higher monoethylenic esters. A., 423. products of partial hydrogenation of some higher polyethylenic

esters, A., 423. Hilditch, T. P., Wheaton, H. J., and American Doucil Co., manu-

facture of base-exchanging compounds, (P.), B., 682\*. Hilditch, T. P. See also Armstrong, E. F., Christian, B. C., Collin, G., and Dhingra, D. R.

Hilger, Ltd., A. See Twyman, F.

Hill, A. See Imperial Chem. Industries, Ltd.

Hill, A. C. See Hatcher, W. H.

Hill, A. E., and Moskowitz, S., ternary systems. VIII. Potassium carbonate, potassium sulphate, and water at 25°, A., 1145.

Hill, A. E., and Smith, S. B., equilibrium between the carbonates and hydrogen carbonates of sodium and potassium in aqueous solution at 25°, A., 884.

Hill, A.J. See Case, F.H. Hill, A.V., diffusion of oxygen and lactic acid through tissues, A., 93.

Hill, C. B., Givens, M. H., and Northwestern Yeast Co., yeastsaving composition in bread-making, (P.), B., 415.

Hill, O. G. See Taylor, H. S.

Hill, E. See Bell, M.

Hill, E. L., and Kemble, E. C., Raman effect in gases, A., 865.

Hill, F. J., size of the molecules of fatty acids, A., 1130.

See Rushton, J. L. Hill, H. G. See Balch, R. T.

Hill, H. H. See Ellett, W. B.

Hill, H. S., and Potter, G. J. C., action of metallic sodium on brominated cyclic acetals, A., 796.

Hill, J. W. See Davis, T. L. Hill, R., reduced hæmatin and hæmochromogen, A., 1094.

Hill, R. See also Heilbron, I. M., and Imperial Chem. Ind., Ltd. Hill, R. M., and Mattison, I. H., creatine. I. Effect of creatine on blood-sugar, A., 956.

Hill, R. M. See also Peabody, W. A.

Hill, S. E., penetration of luminous bacteria by ammonium salts of the lower fatty acids. I. Effects of strong acids and alkalis, A., 1108.

validity of the glass electrode in ammonium chloride buffers, A., 1114.

Hill, T., and British Copper Manufacturers, Ltd., [tilting] furnaces for metals, (P.), B., 478. Hill, T. G. See Haas, P.

Hill, W. H., Jacobson, D. L., and Koppers Co., gas-purification solution and process, (P.), B., 668.

Hiller, A. See Binger, C. A. L., and Van Slyke, D. D.

Hiller, K. See Clusius, K., and Eucken, A.

Hillig, F., and Hartmann, B. G., microscopical identification of malted milk and its flavoured products, B., 658.

Hillig, F. See also Hartmann,  $\widehat{B}$ . G.

Hillman, S. E. See Ward, C. J.
Hillmer, A., and Hellriegel, E., [hadromal, lignin, and coniferaldehyde, preparation and identification]; coniferaldehyde, A.,

Hillmer, A. See also Herzog, R. O.

Hills, F. G., and American Smelting & Refining Co., direct production of arsenic oxide, (P.), B., 897.

Hills, R. J. See Hargreaves, F.

Hillyer, H. W., and National Aniline & Chemical Co., Inc., manu-

facture of o-chloronitrobenzene-p-sulphonic acid, (P.), B., 935. Hilsch, R., and Pohl, R. W., ultra-violet dispersion frequencies, measurable in air, of the alkali halides, A., 1214,

Hilton, A. F., and Farrel-Birmingham Co., Inc., [cast-]iron alloys,

(P.), B., 900. Hilton, F. See Fraser, R. R.

Himmelweit, F. See Dresel, K. Himmen, E. See Helferich, B.

Hincke, W. B. See Prescott, C. H., jun.

Hind, S. R., electric furnaces in the ceramic industry, B., 55.

kilns and kiln firing, I., B., 394.
kilns and kiln firing. II. The Dunnachie continuous gas-fired
kiln. III. The Belgian ring kiln, B., 518.

kilns and kiln firing. IV. The Woodall-Duckham chamber kiln. V. The E.I.C.T. tunnel kiln, B., 682.

kilns and kiln firing. VI. Fuel consumptions up to various times during the firing of a down-draught kiln used for large fireclay lumps, B., 815

kilns and kiln firing. VII. Burning of firebricks in the Shaw chamber kiln, B., 918.

Hinde, J. J., method and machine for manufacture of pulp board, (P.), B., 204.

Hinegardner, W. S., and Johnson, T. B., phenols from chaulmoogric acid and resorcinol, A., 810. Hines, H. M., Boyd, J. D., and Leese, C. E., carbohydrate meta-

bolism in fasting, A., 597.

Hines, J. T., [bituminous mixture for] the making of roads, paths, etc., (P.), B., 941. Hinkel, L. E., and Madel, W. R., substituted aromatic aldehydes

in Hantzsch's pyridine condensation. I. Methoxy-, chloro-, and hydroxy benzaldchydes, A., 704. Hinkelmann, E. See Grimmer, W.

Hinnüber, J., experimental foundations of the passivity theory, A., 270.

periodic phenomena at the anode, A., 270. Hinrichs, A., and Klemm, L., volumetric micro-determination of cholesterol, A., 1114.

Hinsberg, O., isophonyl sulphide and its derivatives, A., 310. action of aromatic aldehydes on phenols, A., 440.

 $\beta$ -n-butyl sulphide, A., 1269. Hinselmann Koksofenbauges., m.b.H., production of metallurgical

coke, (P.), B., 587. Hinsey, J. C., and Davenport, H. A., effect of anæsthesia and of decerebration on the lactic acid and glycogen of mammalian muscle, A., 601.

Hinshelwood, C. N., active nitrogen, A., 39. Hinshelwood, C. N. See also Dalton, R. H., Donnelly, R. P., Glass, J. V. S., and Thompson, H. W.

Hinton, G. B., apparatus for making a cellular cement product, (P.), B., 56.

apparatus for making a spumous mass of cementitious material; manufacture of a cellular cementitious product, (P.), B., 56. Hippel, A. von, ionisation through electronic collision, A., 228. Hiraoka, S. See Yoshioka, T.

Hirata, H., arrangement of micro-crystals in bismuth and antimony deposited by electrolysis, A., 16.

arrangement of minute crystals in electrolytically deposited bismuth and antimony, I. and II., A., 749.

Hirohashi, R. See Takamoto, R. Hirohata, R., protamine. I., A., 1191. Hirota, K., coagulation. II. Empirical equation for gelation velocity, A., 27.

colloidal osmotic pressure of the blood fluid. I. Conditions which influence the colloidal osmotic pressure of the bloodserum. II. Restitution of the blood fluid after hæmorrhage, A., 87.

Hirsch, G., [device for producing gyratory movement of flue gases in] furnaces, (P.), B., 1002.

Hirsch, G. See Feigl, F.

Hirsch, Joseph, determination of the fertiliser requirement of soil, B., 788.

Hirsch, Julius, metabolism of Vibrio choleras in aerobic and anaërobic culture, A., 1200.

titrimetric determination of carbon-containing gases in exhaust gases of motors, B., 802.

Hirsch, M., processes of refrigeration, (P.), B., 269.

Hirsch, Paul, and Schlags, R., determination of the alkali-fixing capacity of the most important sugars, A., 765. Hirsch, Paul. See also Tillmans, J.

Hirsch, R. See Dresel, K.

Hirsch, R. von, and Döpel, R., excitation of helium lines, A., 616.

Hirsch, W. Seo Zinke, A.

Hirsoh Kupfer- & Messing-Werke Akt.-Ges., and Tama, M., electric furnace for heating strip metal by induction currents, (P.), B., 526.

Hirsch Kupfer- & Messing-Werke Akt.-Ges. See also Vacuumschmelze Ges.m.b.H.

Hirschberger, W. See Lucas, R.

Hirschel, O. See Grasselli Dyestuff Corporation.

Hirschel, W., spark producer as atomiser of salt solutions for flame spectra and the photography of their spark spectra, A., 481\*

Hirschfelder, P., mixing solids suspended in liquid, (P.), B., 268. Hirschkind, W., and Great Western Electro Chemical Co., manufacture of alkali xanthates, (P.), B., 432.

manufacture of sodium xanthate, (P.), B., 939. Hirschkind, W., Schedler, C. W., and Great Western Electro Chemical Co., synthetic production of hydrochloric acid, (P.), B., 556.

Hirschkind, W. See also Hagens, J. F. C.
Hirschmann, H. See Rupe, H.
Hirshfeld, C. F., simultaneously separating mixed liquids of

Hirst, A. A. See Ibbs, T. L.

Hirst, C. T. See Greaves, J. E.

Hirst, E. L., and Smith, J. A. B., structure of normal monosaccharides.

V. Lyxose, A., 173.

Hirst,  $E.\ L.$  See also Hampton,  $H.\ A.$  Hirst, F., effect of sugar, acid, and "set" on the keeping properties of jams, B., 146.

Hirst, G. C., [steaming machine for] finishing of textile fabrics,

(P.), B., 515. Hirst, H. S., and Imperial Chemical Industries, Ltd., production of acetaldehyde, (P.), B., 163.

Hirst, H. S., Rowell, S. W., and Imperial Chemical Industries, Ltd., regeneration of [mercury] catalysts, (P.), B., 589.

Hirst, H. S. See also Golding, H. D., and Imperial Chemical Industries, Ltd. Hirst, J. F. See McNair, L. C.

Hirst, L. L., and Olson, A. R., general method of measuring the partial pressure of mercury [over any amalgam] at the ordinary temperature, A., 1226.

Hirst, L. L. See also Olson, A. R.

Hirt, J., galenical preparations of broom; determination of sparteine and total alkaloids, B., 870.

Hirzel, H., and Sharp & Dohme, Inc., preparation of hexylresorcinol, (P.), B., 911. Hisasi, O. See Sugiu, K.

Hishikawa, K., influence of hydrogen-ion concentration on enzymes. IV. Cause of the erepsin-decomposing action of acids, A., 1339.

Hissink, D. J., suggested nomenclature and classification of Dutch soils, B., 30.

significance of the determination of soil acidity in agricultural

practice, B., 31. Hitchcock, D. I., combination of gelatin with hydrochloric acid. II. New determinations of the isoelectric point and combining capacity of a purified gelatin, A., 647.

Hitchcock-Spencer, A. L. See Spencer-Hopwood, Ltd.
Hitchings, G. H., Todd, S. P., and Thompson, T. G., waters of Argyle lagoon. II., B., 304.

Hite, C. E., and Universal Gypsum & Lime Co., insulating material and its manufacture, (P.), B., 396.

manufacture of a wall product [plaster], (P.), B., 434. Hitschmann, G., See Riesz, E., and Schuloff, R.

Hitt, M.V. See Du Pont de Nemours & Co., E.I. Hitz, F. See Rieche, A.

Hixon, R. M. See Coles, H. W., Harlan, W. R., and Peterson,

Hixson, C. T., Campbell, W. M., and Pischel, H. E., non-corrodible battery terminal, (P.), B., 607.

Hiyama, S. See Ishida, Y.

Hjort, A. M., and Dox, A. W., relative physiological properties of certain 5:5-dialkyl- and 1-aryl-5:5-dialkyl-barbituric acids, A., 469.

Hlavica, B., influence of mineral constituents and especially iron oxide on the hydrogenation of coal, B., 666.

Hoagland, D. R. See Johnston, E. S.

Hoagland, R., antineuritic and water-soluble B vitamins in beef and pork, A., 959.

Hoare, F. E., platinum thermometer temperature scale, A., 385. corrections to be applied to the platinum scale of temperature, A., 497.

Hobart Manufacturing Co., mixing machines, (P.), B., 543.

Hobart Manufacturing Co., and Johnston, H. L., mixing machine, (P.), B., 800.

Hobson, R. P., micro-method for determining semicarbazones and its application to analysis of ketones, A., 949. Hobson, R. P. See also Tattersfield, F.

Hocart, R., diamagnetism of some binary halogen compounds, A., 628.

Hoch, J. See Ramart, (Mme.) P. Hoehberg, J. See Petrikaln, A.

Hoohberger, E., the "Delthirna" rosin sizing process [for paper],

[fundamental principles of the "Delthirna process"], B., 320. changes in moist sulphite cellulose on storing, B., 592. Hoche, A., and Litmo Adhesive & Products Co., manufacture of

[waterproof] glue, (P.), B., 568.

Hochhut, J., manufacture of glass-melting crucibles and similar refractory objects of clay, (P.), B., 980\*.

Hochrein, M., Dill, D. B., and Henderson, L. J., physico-chemical system of blood in relation to respiration and circulation. I. and IV. Carbonic acid respiration and hyperpnæa, A., 1094.

Hochrein, M., and Meier, R., lactic acid content of the blood,

Hochrein, M., Talbott, J. H., Dill, D. B., and Henderson, L. J., physico-chemical system of blood in relation to respiration and circulation. II. Determination of blood circulation during rest and work, A., 1094.

Hochrein, M. See also Edwards, H. T.
Hochwalt, C. A., and General Motors Research Corporation,
removal of carbon deposits from engine cylinders, (P.), B., 844\*.

Hochwalt, C. A. See also Midgley, T., jun.

Hook, H., and Stuhlmann, H., action of mercury salts on iron pentacarbonyl. II., A., 412.

Hock, L., thermodynamic theory of rubber fillers, B., 65. isomerisation of rubber under electric discharge, B., 65.

photometric determination of the colour of various lampblacks, B., 180.

Hock, L., and Fromandi, G., constitution and mechanical properties of rubber, B., 444.

Hock, L., and Nottebohm, C. L., electrically-heated thermostats, A., 1034.

Hock, R., detection of milk pasteurised by the holding method, B., 995.

Hoekenyos, G. L., suction as a filtering aid, A., 418. triethanolamine oleate for [insecticide] oil sprays, B., 694.

Hockett, R. C., self-adjusting burette, A., 167.

Hockstein, H. See Oberhoffer, P.

Hodge, D., blasting cartridges, (P.), B., 998. Hodge, D. L. See Finch, G. I.

Hodge, E. T., asphaltite from the Philippine Islands, A., 168.

Hodge, H. B., jun. See Rhodes, F. H. Hodges, A. C., effect of pressure and current density on the

spectrum of helium, A., 1350.

Hodges, A. C., and Michels, W. C., intensity measurements in the helium spectrum, A., 224.

Hodgson, H. H., colour and constitution from the viewpoint of recent electronic theory, A., 1289.

Hodgson, H. H., and Cooper, K. E., colour and constitution. IV.

Absorption spectra of nitrophenylhydrazones in alcohol and in

alcoholic potassium hydroxide, A., 446.

Hodgson, H. H., and Jenkinson, T. A., influence of substituents on Reimer-Tiemann reaction. I. and II., A., 559, 1177.

Hodgson, H. H., and Kershaw, A., nitrosation of phenols. m-Chlorophenol, A., 1062.

Hodgson, H. H., and Nixon, J., Reimer-Tiemann reaction with m-fluorophenol and the nitration of 4-fluoro-2-hydroxy- and 2-fluoro-4-hydroxy-benzaldehydes, A., 1177.

direct dibromination of m-bromophenol, A., 1439. Hodgson, H. H., and Rosenberg, W., influence of chlorine, alone and in conjunction with the sulphonic acid group, on the colours

of substituted benzeneazophenols, B., 1008. Hodgson, J. L., sensitive micromanometer, A., 672.

measurement of steam quantity in works' practice, B., 419. Hodgson, P., and Lewis, H. B., creatine and creatinine excretion in

women, A., 345.
Hodkin, F. W., Howes, H. W., and Turner, W. E. S., influence of

cullet on rate of melting and other properties of soda-lime -silica glass, B., 472.

Hodkin, F. W., Turner, W. E. S., and Winks, F., influence of addition of small quantities of alkaline salts on ease of melting and on working properties of soda-lime-silica glasses prepared from cullet, B., 472.

Hodkin, F. W. See also English, S., and Green, (Mrs.) G. A.

Hodsman, H. J., radiation of heat from gas-lighting burners,

Höber, J. See Höber, R.

Höber, R., and Höber, J., composition of the cellular fluid of Valonia macrophysa, A., 107.
 Hoeflake, (Mlle.) J. M. A., action of gaseous hydrogen chloride on

phosphorus pentoxide, A., 1252.

Hoek, C. P. van, behaviour of white pigments [and paints] under ultra-violet light, B., 180.

determination of oil absorption of pigments, B., 483.

titania and titanium white, B., 862.

Högl, O., balance of effects of different components on the b. p. of wine, B., 735.

Högler, F., Thomann, A., and Überrack, K., fixation of dextrose by blood-corpuscles, A., 1096.

Höjendahl, K., dipole moment as a characteristic property of a group, A., 980. Höjer, J. A., determination of small amounts of iodine by the

Dupré-Winkler method, A., 614.

Hök, W. See Sandqvist, H. Hölterhoff, E. See Dilthey, W.

Höltje, R., solubility of arsenic tri- and penta-sulphides, A., 997. Hoelzel, F., Bergeim test for intestinal putrefaction, A., 1192. Hölzl, F., alkylation of octacyanotungstic acid, A., 433.

alkylation of tetra- and tri-cyanocadmic acid, A., 920.

Hölzl, F. [with Fireks, P. B., and Muchitsch, M.], organic acids and bases in non-aqueous solutions. IV. Phenols and amines, A., 59.

Hölzl, F. [with Khunl-Brady, W.], [composition of] Buff's and Bunsen's salts, A., 545.

Hölzl, F., Meier-Mohar, T., and Viditz, F., alkoxonium hexacyanocobaltiates, A., 898.

alkylation of hoxacyanocobaltic acid, A., 1431.

Hönig, M., and Ruzicka, W., preparation of d-gluconic and galactonic acids, A., 910.

Hönigschmid, O., and Goubeau, J., fundamental at. wts. VII. At. wt. of potassium. II. Analysis of potassium bromide, A.,

Hönigschmid, O., and Holch, H., at. wt. of cerium; analysis of cerium trichloride, A., 370.

Hönigschmid, O., and Sachtleben, R., fundamental at. wts. VIII. At. wts. of silver and barium; analysis of barium perchlorate, A., 370.

Hönigschmid, O. See also Bodenstein, M.

Hoening, P., recovery of phenol from coke-oven gas liquor, B., 383. Höpker, J., and General Aniline Works, Inc., production of resists in dyeing with vat dyes, (P.), B., 938\*.
 Hoeppel, R. W. Sco Swift, E. H.

Höppner, H., Jun. See Weber, A.

Höppner, H., jun. See Weber, A.

Hoermann, F., molybdates and tungstates: binary systems

Li<sub>2</sub>MoO<sub>4</sub>-MoO<sub>3</sub>, Na<sub>2</sub>MoO<sub>4</sub>-MoO<sub>3</sub>, K<sub>2</sub>MoO<sub>4</sub>-MoO<sub>3</sub>, Li<sub>2</sub>WO<sub>4</sub>-WO<sub>3</sub>,

Na<sub>2</sub>WO<sub>4</sub>-WO<sub>3</sub>, K<sub>2</sub>WO<sub>4</sub>-WO<sub>3</sub>, Li<sub>2</sub>MoO<sub>4</sub>-Na<sub>2</sub>MoO<sub>4</sub>, Li<sub>2</sub>WO<sub>4</sub>
Na<sub>2</sub>WO<sub>4</sub>, Li<sub>2</sub>MoO<sub>4</sub>-K<sub>2</sub>MoO<sub>4</sub>, A., 160.

Hofeditz, W. See Paneth, F.

Hoff, A., inorganic phosphoric acid content of arterial and venous blood, A., 1096.

Hoff, C. M., cadmium plating, B., 780. Hoffa, E., Heyna, H., Müller, Fritz, and General Aniline Works, Inc., manufacture of indigoid dyes, (P.), B., 937\*.

Hoffa, E., Luce, W., and General Aniline Works, Inc., production of compounds containing carbocyclic or heterocyclic rings, (P.), B., 1008\*.

Hoffa, E., Runne, E., Thoma, E., and General Aniline Works. Inc., manufacture of chlorine-substituted product of 1-amino-2:4-dimethylbenzene [m-4-xylidene], (P.), B., 973\*.

Hoffa, E. See also Grasselli Dyestuff Corporation. Hoffenreich, F. See Gózony, L. Hoffman, A., manufacture of ethers of diacetone [alcohol], (P.), B., 916.

Hoffman, Alfred,  $\beta$ -phenylisobutyl methyl ketone and derivatives; synthesis of a- and  $\beta$ -phenylisovaleric acids, A., 1178. Hoffman, G. See Eucken, A.

Hoffman, J., ultramarine, A., 1251.

Hoffman, J. I., Lundell, G. E. F., determination of fluorine and of silica in glasses and enamels containing fluorine, B., 1015.

Hoffman, J. I. See also Lundell, G. E. F. Hoffman, W. F. See Gortner, R. A.

Hoffmann, Alfred. See Leuchs, H.

Hoffmann, Axel, examination of tablets of acetylsalicylic acid containing magnesia, B., 451.

Hoffmann, E. See Bucherer, H. T.
Hoffmann, F. See Reinitzer, B.
Hoffmann, Fr., Hartmann formula for calibration of spectral apparatus, A., 615.

determination of the ignition point of liquid fuels, B., 193. Hoffmann, Friedrich. See Mond, R.

Hoffmann, F. G., reactivity of coke, B., 742.

Hoffmann, G., and Pose, H., detection of atomic scattering by measurement of the ionisation produced by a single H-particle, A., 963.

Hoffmann, K. See Berl, E. Hoffmann, P., effect of oral administration of yeast on carbonand oxidation-quotients of urine, A., 351.

Hoffmann, U. See I. G. Farbenind. A.-G.

Hofman, J. J., detection of colouring matter by separation [of

fluid layers], A., 86. Hofmann, A. See Knaffl-Lenz, E.

Hofmann, A. (Zurich). See Karrer, P.

Hofmann, E. See Lieske, R.

Hofmann, F., and Lang, K., thermal reactions of pure organic substances under high hydrogen pressures, B., 707.

Hofmann, F., Otto, M., and Stegemann, W., polymerisation of olefines, (P.), B., 671.
Hofmann, F., and Stegemann, W., refining of petroleum, and of oils

derived from coal, (P.), B., 588.

Hofmann, H., and American Bemberg Corporation, recovery of ammonia from waste waters in manufacture of artificial filaments by the cuprammonium process; recovery of ammonia from dilute solution, (P.), B., 283\*.

Hofmann, H. E., and Reid, E. W., lifting of varnishes by lacquer solvents, B., 403.

cellulose acetate lacquers, B., 924

Holmann, H. E. See also Reid, E. W.

Hofmann, K. A., nitrite-nitrate formation from ammonia and oxygen at alkaline surfaces, A., 35.

Hofmann, K. A., and Hofmann, U., oxidation of silver under dilute solutions of ammonia, A., 156. Hofmann, K. A. See also Leschewski, K.

Hofmann, U. See Hofmann, K. A.

Hofsäss, M., hydrogenating and treating carbonaccous materials, (P.), B., 879.

Hofsäss, M., and Internationale Bergin Comp. voor Olie- en Kolen-Chemie s'Gravenhage, treatment by pressure and heat of heavy mineral oils and carbon material, (P.), B., 933\*.

Hogaboom, G. A., nickel [-plating] solutions, B., 780. Hogan, A. G. See Griswold, D. J., and Ritchie, W. S. Hogness, T. R., and Harkness, R. W., ionisation processes of iodine

interpreted by the mass-spectrograph, A., 114.

ionisation of carbon monoxide by controlled electron impact, interpreted by the mass spectrograph, A., 242. Hogness, T. R., and Kvalnes, H. M., ionisation processes in

methane interpreted by the mass spectrograph, A., 242.

Hohage, R., and Rollett, R., improving the toughness of high-speed

tool steel by carbide annealing, B., 982.

Hohnekamp, M. See Eckhardt, F. Hohner, H., relation between concentration and equivalent refractive power of strong electrolytes in solution, A., 258.

Holbeck, A. A., unit pulveriser, (P.), B., 1036. Holbell, S. A. See Lundsgaard, C.

Holborn, F., and De Forest Radio Telephone & Telegraph Co., [cathode] filament, (P.), B., 563.

Holch, H. See Hönigschmid, O.

Holde, D., metal viscosimeter for simultaneous testing of three oils, B., 86.

determination of softening points of pitches and asphalts by tho Kraemer-Sarnow method, B., 584.

Holde, D., Bleyberg, W., and Aziz, M. A., removal of halogen from halogenated elmostearic acid, A., 677.

tung oil. III., B., 482.

Holde, D., Bleyberg, W., and Rabinovitsch, I., so-called "arachidio acid" and other acids of high mol. wt. from arachis oil, A., 294.

naturally occurring saturated fatty acids of high mol. wt. So-called arachidic acid and other [higher] saturated acids

of arachis oil, B., 785.

Holde, D., Bleyberg, W., and Vohrer, H., acids of montan wax, B., 667.

Holden, G. E., effects produced by the singeing operation on the dyeing properties of cotton, B., 92.

fixation of pigments on textile fibres, B., 92.

singeing of cotton and the formation of oxycellulose, B., 716. Holden, G. E. See also Livsey, H.

Holden, H. C., and Carbide & Carbon Chemicals Corporation,

hydrogenation of crotonaldehydo, (P.), B., 887. Holden, H. F., and Freeman, M., hæmochromogen and related

compounds, A., 1094.
Holden, H. F. See also Hicks, C. S.
Holden, J. A. See Smith, W. S.

Holder, G. See Ginsberg, H.

Hole, E. S., [phenol-formaldehyde] condensation product, (P.), B., 180.

Holford, H. J., and Harvey Holford Separators, Ltd., separators for treatment of mixtures of mutually insoluble liquids, (P.), B., 543.

Holgate, H. W., apparatus [conveyor] for drying bagasse (megass),

etc., (P.), B., 833.

Holgersson, S., X-ray study of minerals of the spinel group, and synthetically prepared substances of the spinel type, A., 1131.

Holgersson, S., and Karlsson, A., X-ray investigation of some mixed crystal systems having monoxides as components; systems CoO-MgO, NiO-MgO, and CoO-NiO, A., 1130. new cobaltites of the spinel type, A., 1409.

Holl, H. See Tillmans, J.

Holl, M. See Lipp, P

Holladay, J. A., and Union Carbide Sales Co., concentration of copper ores, (P.), B., 562.

Holladay, L. L., proportion of energy radiated by incandescent

solids in various spectral regions, A., 116.

Hollaender, A., and Williams, J. W., molecular scattering of light from solids: crystalline sulphates and their water solutions, A., 1362.

Hollaender, A. See also Williams, J. W.

Holland, W. E., and Philadelphia Storage Battery Co., electrolytic

rectifier, (P.), B., 62.

Holland, W. W., and Standard Oil Co., distillation of hydrocarbon oils, (P.), B., 933.

Hollander, C. S., and Rohm & Haas Co., use of sulphoxylates for stripping dyes, (P.), B., 596.

Hollander, F., theories of hydrochloric acid formation in the stomach, A., 1330.

Hollatz, G. Seo Tillmans, J.

Holler, H. D., corrosiveness of soils with respect to iron and steel, B., 787.

reaction between soils and metallic iron, B., 1026.

Holliday, G. O., and Exell, H. C., thermal decomposition of methano. I. Decomposition in silica bulbs, A., 773. Hollings, H., and Pexton, S., economies in the recovery of ammonia [from gas-works' liquor] by the indirect process, B.,

Hollings, H. See also Gas Light & Coke Co.

Hollingsworth, M., burette clamp and holder, A., 1415.

Hollins, J. See Electro Bleach & By-Products, Ltd. Hollnagel, H. P. See Brit. Thomson-Houston Co., Ltd.

Holló, J., and Weiss, E., [ $p_H$  of blood], A., 338. Holloway, J., Kenyon, J., and Phillips, H., dependence of rotatory power on chemical constitution. XXXIII. Resolution of dl-m-carboxyphenyl ethyl sulphoxide and of dl-m-carboxyphenylethylsulphine-p-toluenesulphonylimine, A., 65.

Hollnta, J., and Peter, F., influence of strong electrolytes on the solubility of potassium chlorate, A., 1139.

Holm, E. See Dahl, O.

Holm, G. E. See Grewe, E.

Holm, P., printing sulphur dyes without attacking the printing rollers, B., 715.

Holmberg, A., treatment of iron ores, (P.), B., 59.

sintering apparatus, (P.), B., 522.

Holmberg, B., determination of the configuration of mirrorimage isomerides, A., 536.

↓-cumeno derivatives in crude wood spirit, B., 158.

Holmberg, N. Seo Larsson, E.

Holmboe, C. F. See Nordiske Fabriker De No Fa, A./S.

Holmes, Arthur, ore-lead and rock-lead and the origin of certain ore deposits, A., 1263.

Holmes, Arthur, and Harwood, H. F., tholeiite dikes of the north of England, A., 535.

Holmes, Arthur. See also Dubey, V. S.

Holmes, August. See Cobb, E. B. Holmes, A. D., Clough, W. Z., and Owen, R. J., chemical and physical characteristics of cod oil [industrial cod-liver oil], B., 986.

Holmes, B. E., and Watchorn, E., metabolism of tissues growing in vitro. III. Cyanic acid as a possible precursor of the ammonia and urea formed by embryo kidney tissue, A., 598.

Holmes, B. E. See also Patey, A. Holmes, C. W. H. See Appleyard, K. C.

Holmes, E. See Morgan, G. T.

Holmes, E. G., and Gerard, R. W., nerve metabolism. IV. Carbohydrate metabolism of resting mammalian nerve, A., 1193.

Holmes, E. G. See also Ashford, C. A.
Holmes, E. L. See Flürscheim, B.
Holmes, F. T., penetrating radiation and de Broglie waves, A., 863

Holmes, H. H. See Berry, Wiggins & Co., Ltd.

Holmes, H. N., and Maxson, R. N., influence of a second liquid on the formation of soap gels, A., 646.

Holmes, H. N., Ramsay, J., and Elder, A. L., platinised silica gels as catalysts for oxidation of sulphur dioxide, B., 849.

Holmes, H. N., and Williams, Robert C., uniform distribution of catalysts throughout porous solids, A., 1399.

Holmes, J. A., and Fink, G. J., sodium aluminate as coagulant in chemical treatment of cannory waste waters, B., 341.

Holmes, M. R. See Paul, A. J.

Holmes, O. W., and Morgan, D. P., electrolytic [switch]board for determination of lead, A., 1416.

Holmes, R. M., and Rooney, A. B., thermoelectric power of selenium crystals, A., 1371.

Holmes, W. C., device for identifying colours, A., 671. analysis of thiazine eosinates, A., 712.

stain solubilities. IV., A., 1110.

mechanism of staining: physical theories, A., 1110.

Holmes, W. C., and Snyder, E. F., atmospheric oxidation, or dealkylation, of aqueous solutions of methylene-blue, A., 405. Holmes & Co., W. C. See Cooper, C. Holmogorzeva, J. A. See Rodionov, W. M.

Holoymark, J., theory of electron scattering and excitation by collision, A., 232.

Holroyd, R., and Wheeler, R. V., composition of coal: the activedecomposition point of coal, B., 116.

composition of coal: plant entities as oil-yielding constituents, B., 420.

Holsboer, M. See Fischer, K.

Holscher, H. H., some leadless borosilicate glazes containing nickel oxide, B., 246.

Holschneider, F. W. See Winterfeld, K.

Holst, G., Oosterhuis, E., and Naamlooze Vennootschap Philips' Gloeilampenfabrieken, [cathodo for] electric discharge tube, (P.), B., 291\*

Holsti, O., variations of blood-sugar in disease; effect of potassium iodide and thyroid preparations on the blood-sugar curve, A., 717.

Holt, F. See Imperial Chem. Industries, Ltd.

Holt, M., giant yeast cells, A., 472. Holt, W. Seo Octron, Ltd.

Holtan, E. N. See Darenfeldt-Holtan, M.

Holter, H., and Bretschneider, H., possibility of formation of tetrazomethane, CN<sub>4</sub>, A., 1431.

Holtsmark, J., theory of coupling-widening of spectral lines,

A., 731.

elastic scattering of electrons in argon and the Ramsauer effect, A., 862.

Ramsauer effect in argon, A., 1123.

Holtz, F., micro-determination of phosphate, A., 1114.

Holtz, F., and Brand, T. von, changes in rat's organs due to large over-doses of "vigantol," A., 611.

Holtz, F. See also Heubner, W. Holtz, J. C. See Huff, W. J.

Holtz, P., detoxication of chloroform, A., 1104.

Holub, C., manufacture of artificial light filters, (P.), B., 976\*. Holven, A. L., automatic  $p_H$  recorders for sugar-refinery alkalinity control, B., 1027.

Holwech, W., determination of the transparency of paper to

light, B., 167.

Holweck, F., production of monochromatic X-rays of long wavelength; quantitative action on micro-organisms, A., 356. Holz, M. E., constituents of soya-bean [foots], B., 861.

Holzach, K. See I. G. Farbenind. A.-G. Holzer, H. See Janke, A. Holzhydrolyse Akt.-Ges., and Hägglund, E., manufacture of wood sugar, (P.), B., 810. Holzmann, E., and Pilat, S., higher alcohols from petroleum hydrocarbons. III., B., 930. Holzverkohlungs-Ind. Akt.-Ges., production of acetone, (P.), B., 235. drying of gases and vapours, (P.), B., 500. concentration of volatile aliphatic acids [acetic acid], (P.), B., 589. Holzverkohlungs-Ind. Akt.-Ges. and Roka, K., production of aliphatic ketones, (P.), B., 163. Holzverkohlungs-Ind. Akt.-Ges. See also Roka, K. Holzwarth, H., working of explosion turbines with coal gas, (P.), B., 312. Homatra, Ltd., and Trachtenberg, M., liquid fuel burning apparatus, (P.), B., 934.
Homberg, F., Landecker, M., and American Nuplax Corporation, production of coloured moulded masses from blood, (P.), B., Home-Morton, A., manufacture of sexual hormones, (P.), B., 836. Homer, G. L. See Harshaw, W. J. Homireze Corporation, production of frozen food compositions. (P.), B., 621. Honda, Kanji, and Otsuka, K., effect of gases and vapours on sparking voltage of small tubular electrodes, A., 860. Honda, Kötarő, origin of magnetism based on the structure of atoms, A., 7\*. gyro-magnetic effect and the magnetic deflexion of atomic rays from the viewpoint of the new theory of magnetism, Honda,  $K\delta tar\delta$ , and Osawa, A., distribution of austenite in quenched carbon steels, A., 874. Honda, N. See Atsuki, K. Honey-Butter Co., [honey-butter] food product, (P.), B., 868. Honeywell, E. M. See Bills, C. E. Honeywell, H. B. See Anderson, A. K. Honeywell, H. E. Seo Beehdel, S. I.Honig, P., keeping quality of white sugars, B., 617. analysis of canc-sugar, B., 573. Honig, P., and Alewyn, W. F., cane-sugar manufacture in Java; centrifugal treatment of syrups, B., 33. Honigmann, L., means for continuous drying or distillation of fine granular masses, (P), B., 381\*. Honigmann, L., and Bartling, F., revolving ring-hearth oven, (P.), B., 305. drying and grading plants for granular water-containing materials, (P.), B., 496.

Hood, N. R. See Baly, E. C. C. Hoogerduyn, M. J. J. Seo Straub, Jan. Hooghoudt, S. B. See Lifschitz, I. Hooker, M. O. See Fischer, Martin H. Hooker Electrochemical Co. See Spina, J. A.Hooley, L. J., Thomas, J., and Scottish Dyes, Ltd., production of [acid] dyes; [anthraquinonc-acridinesulphonic acids], (P.), B., 124. manufacture of derivatives of the benzene, naphthalene, and acenaphthene series, (P.), B., 807. Hooley, L. J. See also Hereward, H. W. Hoon, R. C. See Dunnicliff, H. B. Hoover, C. P., and Montgomery, J. M., reduction of carbonate hardness [in water] by lime softening to the theoretical limit, B., 912. Hoover, W. H. See Fairchild, C. O. Hope, E. See Callow, R. K. Hopff, H. See I. G. Farbenind. A.-G., and Meyer, K. H. Hopfield, J. J., hydrogen absorption [in the ultra-violet], A., 1349. new absorption bands in nitrogen, A., 1350. Hopfield,  $J. \tilde{J}$ . See also Birge,  $\tilde{R}$ . T. Hopkins, B. S. See Quill, L. S., and S. Hopkins, C. Y. See Renshaw, R. R. See Quill, L. S., and Selwood, P. W. Hopkins, E. S., composition and use of ferric hydroxide as a coagulant [in river water], B., 190.

Hopkins, (Sir) F. G., crystalline tripeptide from living cells. A., 1322 Hopkins, (Sir) F. G. [with Harris, L. J.], glutathione, A., 1491. Hopkins, F. W., rapid drying finishes for wood surfaces, B., 293.

Hopkins, H. H. See Nobel Industries, Ltd.

cellulose nitrate solution, (P.), B., 366. Hopkins, N. M., and Burnot Fireproofing Products, Inc., fireproofing and weather-resisting paint, (P.), B., 651. Hopkins, R. H., proteolytic enzymes of green malt. I. Adsorption and elution, A., 1490. Hopkins, R. H., and Kelly, H. E., formation of buffer substances in malting, B., 792. Hopkirk, F. C., and Tennant & Co., Ltd., C., binding agent for materials used for road construction, (P.), B., 646. Hopmeier, M. See Schuloff, R. Hoppe, G. See Herzberg, W. Hopper, I. V., preparation of semicarbazones in pyridine solution, A., 700. Hoppe-Seyler, F. A., Linneweh, W., and Linneweh, F., occurrence of anserine and carnosine in reptiles and birds, A., Hoppe-Seyler, F. A. See also Linneweh, W.Hora, F. See Heller, K. Horat, L. E. See Sullivan, J. Horch, R., and Schulteis, boiling of wort in relation to the primary and secondary fermentation, B., 792. Hori, S., physical and pharmacological influences on the action of curare. III. Effect of calcium, barium, and magnesium. IV. Physostigmine and nicotine, A., 215. Hori, T., CH-band at 3143 A. and a new NH-band at 2530 A., A., 1214. Horiguchi, S. See Goto, M. Horii, S., stencil sheet, (P.), B., 320, 470\*, 1043.

Horino, K., specific homolysis. I. Specific adsorption of homolysin and complement. II. Enzymes of guinea-pig scrum. III. Lysinogen of erythrocytes, A., 589. Horiye, Y., micro-determination of cholesterol, A., 110. relationships between cholesterol metabolism and the production of the bile acids, A., 212. Horkheimer, P., acetone and acetoacetic acid in urine, A., 716. determination of blood-sugar, A., 1190. determination of the ethereal oil of Folia mentha piperita, B., 226. Horkheimer, P. See also Fischer, Ph. Horn, D. W., and Osol, A., cacao butter, B., 860. Horn, E. See Stampe, G., and Thiel, A. Horn, O., acetylation of beech wood, A., 175. decomposition of coal into definite organic compounds by oxidation, B., 929. oxidation of Willstätter's lignin with nitric acid, B., 929. Horn, O. See also Fuchs, W. Horn, Z. See Mansfeld, G. Horn Co, A. C. See Snyder, J. K. Hornby, F. A. See Woodall-Duckham (1920), Ltd. Horne, W. D., simplified cataphoriser, A., 44. determination of dextrose, B., 224. Hornig, A., decomposition of trithionate solutions, A., 40. Horning, E. S. See Richardson, K. C. Horning, S. C. See Reed, R. F. Hornsey, J. W., reduction of iron ores or oxides, (P.), B., 360. Horrobin, S. See Callan, T. Horsch, S. M., antimony phosphate, A., 779. Horsch, S. M., and Betsis, G., synthesis of arsenic phosphates, A., 778. Horsch, W. G., and Vulcan Detinning Co., recovery of zinc [from galvanised iron scrap], (P.), B., 856. Horsfall, R. S., Lawrie, L. G., and British Dyestuffs Corporation, Ltd., protection of animal fibres against effects of alkaline or acid media, (P.), B., 51\*. Horsley, C. H. See Wardlaw, H. S. H. Horsley, G. F., and Imperial Chemical Industries, Ltd., production of aluminium sulphate, (P.), B., 643 production of aldol and crotonaldehyde, (P.), B., 672. hydrogenation of aldehydes, (P.), B., 806. Horsley, G. F. See also Imperial Chem. Industries, Ltd. Horst, F. W., small gas muffle oven, A., 1033. Horst, H. See Ginsbach, F. Horst, W. P. ter, and Rubber Service Laboratories Co., vulcanised rubber composition and its manufacture, (P.), B., 446.

Horsters, H., and Rothmann, H., effect of oral administration of

bile acids on the sugar metabolism of the diabetic, A., 1100.

Horton, K., Marrack, J., and Price, I., relation of calcium in the

saliva to dental caries, A., 1481. Horton, P. G. See Foulk, C. W.

Hopkins, M. B., Buc, H. E., and Standard Oil Development Co.,

Horváth, E., decomposition of maize stalks by chlorine, B., 937. decomposition of rye straw and maize stalks by different fermentation processes, B., 974.

Hošek, J., "formolito" analysis of mineral oil, B., 967.

Hosenfeld, M., occurrence of beryllium, B., 722. Hosenfeld, M. See also Illig, K. Hoshino, T. See Wieland, H.

Hosking, J. R., kauri resin, B., 754.

Hosking, J. R. See also Ruzicka, L. Hoskins, C. R. See Carter, J. S., and Dawson, H. M.

Hosono, T. See Kumagai, T.

Hosoya, S., pyocyanase, A., 1107.

Hosoya, S., and Miyata, S., bacterial toxins; tetanus toxin, A., 1109

Hosoya, S., Stefanopoulo, G. J., and Miyata, S., purification of Bacillus botulinus toxin, A., 1109.

Hoth, W., and Pyl, G., preparation of azoimide and its salts, A.,

Hoton, L., identification substances in margarine, B., 109. determination of coconut oil in butter, B., 109.

Hottinger, A., antirachitic principle of irradiated food, A., 727.

Hottmann, C. W., mixer, (P.), B., 838.

Hotz, E. See Grasselli Dyestuff Corporation.

Houben, J., and Fischer, Walter, nuclear condensation of phenols and phenolic ethers with nitriles to ketimines and ketones of phenols and phenolic ethers. III. Synthesis of cotogenin, protocotoin, isoprotocotoin, and methylprotocotoin (oxyleucotin), A., 1302.

nuclear condensation of phenols and phenolic ethers with nitriles to ketimines and ketones of phenols and phenolic ethers. IV. Syntheses with phenol, o-, m-, and p-cresols, and p-tolyl

methyl ether, A., 1651.

Houben, J., and Wollenweber, H. IV., hexylresorcinol and phenylethylresorcinol as remedies against pathogenic plant fungi, A.,

Houck, R. C. See Sheppard, S. E. Houdremont, E., and Ehmcke, V., heat-resisting steels, B., 854. Houdremont, E., Ehmcke, V., and Krupp A.-G., F., steel alloy, (P.), B., 526\*.

Houdremont, E., and Mailander, R., prolonged bending tests with

steels, B., 601. Hough, G. J., recovery of platinum, A., 1157.

determination of bismuth [in ores], B., 753. Houghland, G. S., estimating heat consumed in batch rectification

of alcohol, B., 299. Houghland, G. V. C., adsorption of potassium from different sources, and nitrification studies with Norfolk sandy loam, B., 67.

fertiliser studies with early potatoes, B., 222. Houghton, E. O. See Hibbert, H.

Houghton & Co., E. F. See Langenberg, F. C. House, M. C., Nelson, P. M., and Haber, E. S., vitamin content of tomatoes ripened artificially and naturally, A., 610.

Houseman, P.  $\bar{A}$ ., and Lacey, H. T., liquorice root in industry,

Houssa, A. J. H., Kenyon, J., and Phillips, H., relative configurations of d-\$\beta\$-octanol and its dextrorotatory halides; interconversion of the optically active  $\beta$ -octanols by a new method, A., 1164.

Houston, J., miscometer, A., 166.

Houston, R. A., effect of temperature of radiation on its photo-

graphic action, A., 865. Houston, W. V., singlets and triplets in the spectra of twoelectron systems, A., 480.

temperature dependence of electron emission under high fields,

temperature dependence of electrical conductivity, A., 1135. Houtermans, F. G. See Atkinson, R. d'E., and Gamow, G. Hovey, A. G. See Kienle, R. H.

Hovorka, V. See Hanus, J. Howald, A. M. See Grasselli Chem. Co. Howard, C. H. See Russell, W. C.

Howard, F. A., and Standard Oil Development Co., converting [cracking] hydrocarbons into lower-boiling products, (P.), B., 234.

preparation of hydrocarbons, (P.), B., 386.

manufacture of lighter products from hydrocarbons, (P.),

preparation of hydrocarbon products, (P.), B., 882.

Howard, F. C., and Dunn, E.  $\hat{T.}$ , crystalline changes in copper due to annealing, B., 601.

Howard, G. C., treatment of waste sulphite[-cellulose] liquor, (P.), B., 391.

Howard, H. A. H. See Cammidge, P. J.

Howard, M. See Brown, W. H.

Howard, R. C., Rockwell, G. E., and Crist, W. L., antiseptic value of chlorine with reference to animal skin disinfection, B., 949.

Howard, W. R. See Egloff, G.

Howard, W. V., evolution of the odd-numbered elements, A., 117. Howards & Sons, Ltd., Blagden, J. W., and Clark, G. C. H., manufacture of [metallic] catalysts, (P.), B., 480.

Howards & Sons, Ltd. See also Blagden, J. W.

Howe, C. E., measurement of the  $K_{\alpha}$  line of carbon, A., 630. Howe, H. E. See Elvehjem, C. A., and Lindow, C. W.

Howell, E., microscopical study of cast iron and its relation to the

foundry, B., 942.

Howell, O. R., molecular structure in solution. IV. Densities, viscosities, and electrical conductivities of aqueous solutions of cobalt chloride and hydrochloric acid at different temperatures, A., 259.

Howells, L. J., manufacture of yeast, (P.), B., 867.

Howells, L. T., determination of detergency of soap products, B., 607.

Howells, W. J., binary system carbamide-ammonium nitrate; molecular association in each component, A., 766.

Howes, D. A. See Nash, A. W. Howes, D. W. See Nash, A. W. Howes, H. L. See Nichols, E. LHowes, H. W. See Hodkin, F. W. Howes, R. T. See Black, J. C. Howie, G. See Cumming, W. M. Howitt, F. O. See Allan, H.

Howser, C. L. See Taylor, J. L. Hoyem, A. G., and Tyndall, E. P. T., experimental study of the growth of zinc crystals by the Czochralski-Gomperz method, A., 246.

Hoyle, E., vitamin content of honey, A., 358.

Hoyle, J. C., serum-calcium. II. Experimental tuberculosisintraperitoneal inoculation. III. Experimental tuberculosissubcutaneous inoculation, A., 93.

Hoyle, J. C., and Buckland, H., effects [on animals] of large doses of irradiated ergosterol, A., 853.

Hoyois, L., washing of coal, ores, and similar materials, (P.), B., 121\*.

Hoyt, C. F., Smith, N. C., Lampert, L. M., and Saywell, L. G., lactometer as used to determine solids-not-fat in milk, B., 535. Hrach, V. See Kranz, C

Hromatka, O. See Spath, E. Hrubesky, C. E., and Browne, F. L., water-resistant animal glue, (P.), B., 568.

Hrynakovski, C., rhythmic crystallisation of alum in a metastable system, A., 1407.

Hsu, J. H., mechanism of photo-electric emission, A., 1356.

Hsü, T., platinum resistance thermometer, A., 1161. Huan, M., action of magnesium ethyl bromide on succintetraethyldiamide, A., 686.

Huang, J. V. S. See Schroeter, Georg.

Hubáček, J. See Novák, H.
Hubárd, D. See Carroll, B. H.
Hubbard, D. W., and Rees, W.J., dissociation of carbon monoxide in contact with refractory materials, B., 680. Hubbard, J. C. See Freyer, E. B.

Hubbard, R. S., reaction of the morning urine, A., 1480.

Hubbard, R. S., and Steele, T. M., variations in the morning alkaline tide of normal individuals, A., 1481.

Hubbuch, L. H. [with Lowy, A.], electrochemical reduction of azo-dyes to their respective amino-compounds, B., 164.

Huber, E. See Staudinger, H. Huber, F. See Ebel, F.

Hubert, E. See I. G. Farbenind, A.-G.

Hubmann, O., apparatus for distilling solid combustible carbonaceous material, (P.), B., 10\*.

Hubmann, O., and Metallbank & Metallurgische Gesellschaft Akt.-Ges., apparatus for distilling combustible materials, (P.), B., 44.

apparatus for cleansing and cooling gases, (P.), B., 80.

Hucker, G. J., the Coccaceae. XII. Action of streptococci on caseinogen. XIII. Production of carbon dioxide by streptococci. XVI. Biochemical reactions produced by streptococci, A., 218.

action of streptococci on caseinogen, A., 1108.

Hucker, G. J., biochemical reactions of streptococci, A., 1341. production of carbon dioxide by streptococci, A., 1341.

Hudson, C. S., and Isbell, H. S., rotatory power and structure in the sugar group. XIX. Preparation of aldonic acids, A., 1043. Hudson, C. S., and Pacsu, E., crystalline turanose, A., 1045. Hudson, D. P. See Graesser-Monsanto Chem. Works, Ltd. Hudson, G. R., providing an embossed design upon cloth or like material. (P.) P. 210.

material, (P.), B., 812.

Hudson, J., refrigerating apparatus, (P.), B., 501. Hudson, J. C., atmospheric corrosion of metals; third (experimental) report to the Atmospheric Corrosion Research Committee (British Non-Ferrous Metals Research Association), B., 684, 899.

Hudson, J. M., and Sheppard, S. E., preparation of standard

gelatin, B., 369. Hudson, O. F., Herbert, I. M., Ball, F. E., and Bucknall, E. H., properties of locomotivo firebox stays and plates, B., 819.

Huebner, J., and Diehl, K. F., spinning of artificial silk, etc., (P.), B., 203.

Huebner, J., Gaebel, R. J. H., and Nuera Art-Silk Co., Ltd., spinning of artificial silk, etc., (P.), B., 469.

Hübner, W. See Weinland, R. Hübsch, M.G. See Karpati, J.

Hübsch, R. See Riesz, H.

Hübscher, J., apparatus for gasometric determinations in technical analysis, B., 267.

Hückel, E., theory of the mobilities of the hydrogen and hydroxyl ions in aqueous solution, A., 143.

Hückel, W., molecular structure and dipole moment, A., 627. Hückel, W., and Havekoss, H., meaning of action constants in substitution reactions in the benzene nucleus, A., 1287.

Hühn, G. See Bangert, H. Huelin, F. E., nucleo-cytoplasmic ratio in plant tissues, A., 728. Hülsbruch, W., and Vereinlgte Stahlwerke A.-G., alloy-steel building material, (P.), B., 900\*.

Hülse, W., and Franke, K., chemistry of increase of bloodpressure in nephritis, A., 1192.

Hünemörder, M. Sco Hauser, E. A.

Hüthig, O., detection of n-propyl alcohol in commercial allyl alcohol, B., 1007.

Hüttenes, C., and Hüttenes, C. P., manufacture of tanning materials from sulphite-cellulose liquors, (P.), B., 369.

Hüttenes, C. P. See Hüttenes, C.

Hüttenwerk Niederschöneweide A .- G., working-up of materials containing lead, tin, copper, and antimony, (P.), B., 984. Hüttenwerke Tempelhof A. Meyer. See Meyer, M., and Speichert.

Hüttenwerke Trotha Akt.-Ges., and Wetter, W., separation of tin from oxidic stanniferous and plumbiferous materials, (P.), B., 439.

Hüttig, C., fluorescent bacteria from water, soil, and plants, A., 1108.

Hüttig. G. F., [filtering] apparatus with fused-in porous glass plates, A., 167.

Huttig, G. F. [with Oschatz], additive compounds of lithium halides with methyl and ethyl alcohols; existence rule in homologous series of complex compounds, A., 1387.

Hüttig, G. F., and Garside, H., system ferric oxide-water, A., 510. Hüttig, G. F., and Juza, R., lowering of the vapour pressure of

liquid argon by active substances, A., 387. Hüttig, G. F., Magierkiewicz, S., and Fichmann, J., specific heats and vapour pressures of systems formed from water and the oxides of zirconium, thorium, and tin, A., 511.

Hüttig, G. F., and Rosenkranz, E., ternary system CaO-CO<sub>2</sub>-SiO<sub>2</sub>

relative to the setting of mortar, A., 884.

Hüttig, G. F., and Slonim, C. [with Trip, L., and Maier, O.], specific heats, heats of formation, and decomposition pressures of strontium halide hydrates, A., 990

Hüttig, G. F. See also Slonim, C., and Thurnwald, H.

Huff, E. R., and McCrosky, C. R., preparation of selenic acid and its salts, A., 779.

Huff, L. C., Bogardus, A. G., and Universal Oil Products Co., safety appliance [for oil-cracking apparatus], (P.), B., 386. Huff, L. C., and Universal Oil Products Co., apparatus for con-

version of hydrocarbons, (P.), B., 668.

treating [cracking] residual [hydrocarbon] oils, (P.), B., 508. Huff, W. J., hydrogen-volatile matter ratio in American coals and its use in producer-gas calculations, B., 81.

phases of the organic sulphur problem in the manufacture and utilisation of gas, B., 966.

Huff, W.J., and Holtz, J.C., origin and decomposition of carbon disulphide in gas making. II. Carbon-sulphur complex, B., 270.

Huffman, C. F. See Robinson, C. S. Huffman, H. M. See Parks, G. S. Hugel, G., Paul, M., and Boistel, M., hydrogenation of organic substances, especially of the products of the distillation of coals and petroleum oils, (P.), B., 196. Huggett, J., application of thermomagnetic analysis to the study

of oxides and minerals of iron, A., 1369.

Huggins, K. A. See Muskat, E. Huggins, M. L., and Frank, G., crystal structure of potassium dithionate, A., 1369.

Hugh, W. E., Kon, G. A. R., and Mitchell, T., chemistry of the three-carbon system. XXI. Some cycloheptane compounds, A., 1071.

Hugh, W. E. See also Dickens, A. H.
Hughes, A. L., and Rojansky, V., analysis of electronic velocities by electrostatic means, A., 1122.

Hughes, B. S., and Hughes, S., evaporator, (P.), B., 664. Hughes, E. B. See Lampitt, L. H. Hughes, E. D., and Watson, H. B., reaction of bromine with aliphatic acids. III. [Keto-enol tautomerism in] a- and y-ketonic acids, A., 1272.

Hughes, J. See Imperial Chem. Industries, Ltd.

Hughes, J. S. See Titus, R. W.Hughes, O. L., and Mead, T. H., solubility of sodium thiocyanate in water and in organic solvents, A., 1375.

Hughes, S. See Hughes, B. S. Hughes, W., spiral markings on carborundum crystals, A., 495. Hughes, W. S., Harrop, J., and Standard Oil Development Co., preparation of fuel oil, (P.), B., 508.

Hughesdon, R. S., Robertson, G. J., and Read, J., laboratory apparatus for continuous circulation of liquids and vapours, A., 1415.

Hughesdon, R. S. Seo also Read, J.

Hughson, W. G., low-temperature carbonisation of blended New Zealand coals, B., 629.

Hugill, W., and Rees, W. J., effect of substituting high-silica sand for some grades in lime-bonded silica bricks, B., 394. Hugill, W. See also Rees, W. J.

Hugouneng, L., and Couture, E., action of the cholesterol of codliver oil on the photographic plate, A., 359. photochemical action of sterols of diverse origin, A., 610.

photochemical activity of various sterols and the nature of their action, A., 895.

Hugues, E., defective wines, B., 108.

iron content of wines from the Hérault district, B., 907.

Hulač, V. See Schindler, J.

Hulburt, E. O., intensities of the lines of the mercury spectrum, A., 1353.

ions and electric currents in the upper atmosphere of the earth, A., 1417.

Hulett, G. A. See Gardiner, W. C., and Niederhauser, W. S. Hulin, P. L., electrolytic production of light metals, (P.), B., 100.

Hulin, P. L. See also Soc. Anon. Comp. de Prod. Chim. & Electrométallurgiques Alais, Froges, & Camargue.

Hull, A. W. See Brit. Thomson-Houston Co., Ltd. Hull, H. B. See Frigidaire Corp.

Hull, P. H., and Imperial Chemical Industries, Ltd., transformation of gaseous hydrocarbons, (P.), B., 274.

effecting chemical reactions in [hydrocarbon] gases by means of electrical discharges, (P.), B., 606, 880.

Hull, S. M., and Western Electric Co., Inc., organic moulding composition, (P.), B., 729.

Hulme, A. G., Baker Perkins, Ltd., and Anciens Établissements A. Savy, Jeanjean & Cie., crystallisation of gums, fondants, sweetmeats, etc., (P.), B., 226.

Hulsbruch, W. See Verein. Stahlwerke A.-G.

Hult, P. S. See Morgan Construction Co.

Hultgren, A., crystallisation and segregation phenomena in 1·10% carbon steel ingots of smaller sizes, B., 921.

Hultgren, A. G. E., salt-bath furnace, (P.), B., 561.

Hulthén, E. See Bengtsson, E.
Hultman, E. W., Duncklee, F. P., Monteleone, J., and Simons, W. R., rubber-like substances, (P.), B., 368.

Hulton, H. F. E. See Baker, J. L.

Humble Oil & Refining Co., recovery of oils and naphthenic acids from still residues obtained in the purification of mineral oils, (P.), B., 274.

Humboldt Sulphur Co. See Crowley, A. J.

Hume, E. M. See Collinsou, D. L.

Hume, J., thermostat to work off A.C. mains, A., 1415. Hume, W. R., crushing or pulverising machine, (P.), B., 702\*.

Hume-Rothery, W., composition of α-bronze, B., 1018. Hume-Rothery, W., and Rounsefell, E. O., system magnesium zinc, A., 398.

Humfeld, H., and Erdman, L. W., significance of hydrogen-ion concentration in soil nitrification studies, B., 297.

Humm, W., determination of chlorine-consumption number

(Sieber number) of sulphite-celluloses, B., 638.

Humme, H. Sec Fricke, R.

Hummel, C., case-hardening of iron, (P.), B., 648.

Hummel, C. See also Langguth, W.
Hummel, G. See Fischer, Hans.
Hummicki, V., mixed glycerides of salicylic acid. I. and II., A., 811, 1068\*.

Humnicki, V., and Lunkiewicz, (Mlle.) J., mixed glycerides of salicylic acid. III., A., 1068.

Humphrey, C. W. See Lea, H. I.

Humphrey, G. C. See Hart, E. B.

Humphrey, H. A. and Invariant Chamical Industrian Industrian

Humphrey, H. A., and Imperial Chemical Industries, Ltd., treatment of solid carbonaceous material for the recovery of oils, (P.), B., 312.

destructive hydrogenation of carbonaceous materials, (P.), B., 465.

centrifugal apparatus [for gases], (P.), B., 545\*.

Humphreys, V. G. See Chattaway, F. D.
Humphreys, C. F. See Armstrong Cork Co.
Humphreys, C. J. See Meggers, W. F.
Humphreys, C. W. See McBain, J. W.
Humphreys, G. See Redfield, A. C.

Humphreys & Glasgow, Ltd., Battin, W. I., and Chrisman, C. S., gas generators, (P.), B., 506.

Humphreys & Glasgow, Ltd., Rusby, J. M., and Battin, W. I., carbonising and burning bituminous fuel, (P.), B., 705.

Humphreys & Glasgow, Ltd., and Stelfox, J. C., liquid scals with

special reference to gas producers or generators, (P.), B., 746. [mechanical] apparatus for use in manufacture of water-gas and in other cyclical processes, (P.), B., 916.

Hun, (Mlle.) O. See Bourion, F. Hunczek, J. See Sauerwald, F. Hund, F., interpretation of spectra of molecules,... IV., A., 117. molecular structure and chemical linking, A., 122.

assignation, especially of multiplet terms to series limits, A., 363. chemical binding, A., 1367.

Hundertmark, H. See Lehmstedt, K.

Hundt & Weber Ges.m.b.H., device for separating dust, water, oil, etc. from air, gases, and vapours, (P.), B., 3.

drying method and dovice, particularly for drying lacquered articles [by ozonised air], (P.), B., 786.

Hungária műtrágya, kénsav és vegyi ipar részvenytársaság, and Deutsch, L., manufacture of copper sulphate [briquettes], (P.), B., 206.

Hunn, A. E. M., and Gray, C. R., [recessed] surgical dressings, (P.), B., 797.

Hunneman, R. D. See Wilson, R. E.

Hunnius. See Densch.
Hunt, E. F. See Hunt & Moscrop, Ltd.
Hunt, E. W. See Hunt & Moscrop, Ltd.
Hunt, H., and Briscoe, H. T., conductivity of solutions of some aliphatic organic acids in water and ethyl alcohol, A., 401. electrical conductivity of organic acids in water, alcohols, and acetone, and the electronic structures of the acids, A., 1390. Hunt, J. K., formation of ozone in the electrical discharge at

pressures below 3 mm., A., 274. Hunt, R., and Renshaw, R. R., action of certain heterocyclic compounds on the autonomic nervous system, A., 349, 1487. effects of derivatives of betaineamide and of choline ethers on the autonomic nervous system, A., 468.

[pharmacological action of] ethers of formocheline and choline, A., 1487.

Hunt & Moscrop, Ltd., Hunt, E. W., and Hunt, E. F., [spraying] apparatus for treating fabrics with liquors, (P.), B., 640.

Hunten, K. W., and Maass, O., surface tension constants in an homologous series from the point of view of surface orientation,

Hunter, A., creatine content of tissues of fishes, A., 590. distribution of arginase in fishes, A., 590. specific rotatory power of d-arginine, A., 1048.

Hunter, H. L. See Dennis, L. M.

Hunter, R. F., and Pride, W. E., aminobenzthiazoles. XII. Mobility of 1-amino-3:5-dimethylbenzthiazole; a case of complete reactivity in the aminothiazole form, A., 829.

Hunter, R. F., and Styles, E. R., aminobenzthiazoles. Mobility of the 1-amino-3-methylbenzthiazole system, A., 78. Hunter, R. F. See also Dyson, G. M.

Hunter Machine Co., J. See Buck, L. Huntsinger, M. E. See McClure, C. W. Hunziker, O. F., Cordes, W. A., and Nissen, B. H., metals in dairy equipment; metallic corrosion in milk products and its effect on flavour, B., 795.

powders, chemical sterilisers, and refrigerating brines, B., 943. metals in dairy equipment; corrosion caused by washing

Hunziker, O. F., and Pfaudler Co., treatment of milk and its

products, (P.), B., 868. Hupfeld, H. H., duration of the phosphorescence of the I<sub>2</sub>, K<sub>2</sub>, Na<sub>2</sub>, and Na resonance emission, A., 741.

Hurd, C. D., and Bennett, C. W., concentrating hydrazine hydrate solutions, A., 282. pyrolysis of benzaldehyde and of benzyl benzoate, A., 699.

Hurd, C. D. See also Garrett, J. W. Hurd, N. L. See Frolich, P. K.

Hurlbut, F. A. See United Glass Bottle Manufrs., Ltd. Hurlston, E. H. See Macintosh & Co., Ltd., C.

Hurrell, G. C., manufacture of bituminous emulsions, (P.), B., 817.

Hursh, K. R. See McVay, T. N.

Hurst, H. E., suspension of sand in water, A., 642.

Hurter, A., catalytic or contact materials [for ammonia synthesis], (P.), B., 321.

Hurtley, W. R. H., replacement of halogen in o-bromobenzoic acid, A., 1294.

Hurttle, K. See Goodyear-Zeppelin Corp.

Huruya, A., phosphorus poisoning in rabbits, A., 955. Hurxthal, L. M., Bock, A. V., Talbott, J. H., and Dill, D. B.,

alkaline reserve and oxygen capacity of arterial and of venous blood, A., 587.

Husain, S., behaviour of hydrogen peroxide in aqueous alkali phosphate solutions, A., 265.

Husain, S., and Partington, J. R., production of pseudo-per-phosphates, (P.), B., 94. Huss, W. See Dietzel, R.

Hutchins, T. W. S., electrodeposition of metals, (P.), B., 480\*. Hutchinson, H. B. See Distillers Co., Ltd.

Hutchison, W. K. See Pexton, S. Hutchisson, E., quantum theory of the specific heat of hydrogen chloride, A., 23.

Hutschenreuter, R. See Langenbeck, W.

Huttner, K. See Birckenbach, L. Hutton, M. K. See Daniels, A. L.

Huxford, W. S. See Williams, N. H.

Huxley, L. G. H., corona discharge in neon, A., 1350. Huyser, H. W. See Ruzicka, L.

Hyatt, J. M., secondary electron emission produced by positive cæsium ions, A., 228. distribution of electrons between the plate and grid of a three-

electrode tube as determined by positive casium ions,

A., 1121. Hyatt, J. M., and Smith, H. A., secondary electron emission from

molybdenum, A., 229. Hybinette, N. V., heat-resisting structure, etc., (P.), B., 439. heat-enduring metal, (P.), B., 439.

cleaning and annealing of metal, (P.), B., 440.

[iron-nickel] alloy, (P.), B., 856. Hybinette, V. N., and Hybinette Patents Corporation, anti-fatigue alloy; non-corrodible structure; plastic, light aluminium alloy, (P.), B., 439.

Hybinette Patents Corporation. See Hybinette, V. N.

Hycolite Liquid Wallpaper Manufacturing Co., Ltd. See Heyl,

Hyde, A. C., application of materials or bodies for the purpose of coating or otherwise covering surfaces, (P.), B., 483.

Hyde, J. F. See Adams, R. Hyde, R. W., and Dwight & Lloyd Metallurgical Co., treating earthy minerals, (P.), B., 18\*.

Hyden, E. See Beutner, R. Hyden, W. L., manufacture and properties of regenerated cellulose

films, B., 749.

Hylleraas, E. A., homopolar combination in excited hydrogen molecules, A., 7.

calculation of the energy of helium in the fundamental state and the lowest terms of orthohelium, A., 616.

energy of the helium atom in the ground state, A., 616.

Hyman, A.J. See Hijman, A.J.

Hyman, H. H., and Birge, R. T., molecular constants of hydrogen, A., 235.

Hyman, M., automatic pipette, A., 287.

Hyman, P. N. See Kampa, E. P.

Hymas, F. C., photochemical methods of testing sources of ultra-violet radiation, A., 1152.

Hymas, F. C., and Middleton, G., oxidation of ether: effect of certain gases, B., 869.

Hyslop, J. F., reports on glasshouse pots. I., B., 472.

crystal growth in opal glass, B., 776. Hyslop, J. F., and Rooksby, H. P., [effect of heat on] the crystalline break-up of kaolin, B., 172.

I. G. Farbenind. A .- G., apparatus for distillation, rectification, or evaporation, (P.), B., 4.

treatment of gases with liquids in scrubbing towers, (P.), B., 4. destructive hydrogenation of carbonaceous materials, (P.),

B., 8, 45. production of phosphoric esters of aliphatic alcohols, (P.), B., 10 production of pure a-hydroxycarboxylic acids, (P.), B., 11. manufacture of vat dyes of the anthracene series, (P.), B., 12,

manufacture of stable diazo-salt preparations, (P.), B., 12. manufacture of reduction products of vat dyes and other reducible organic compounds, (P.), B., 12.

treatment of cellulose, (P.), B., 13.

production of effect threads, (P.), B., 14.

dyeing of textile goods [with vat dyes], (P.), B., 15.

dyeing by means of leuco-ester compounds of dyes of the indigo series and other vat dyes, (P.), B., 15.

printing with vat dyes, (P.), B., 15.

production of mixed crystals containing potassium and ammonium, (P.), B., 16.

production of ammonium phosphates from mono- or di-calcium phosphate, (P.), B., 16.

anhydrous magnesium chloride, (P.), B., 17.

recovery of hydrogen from gaseous mixtures rich in same, (P.), B., 18.

production of phosphorus, (P.), B., 18.

manufacture of condensation products from urea, thiourea, or their derivatives, and an alcohol or a ketone, (P.), B., 28,

manufacture of photographic developers [hydroxyethylated p-aminophenols], (P.), B., 38, 912.

manufacture of liquid and other hydrocarbons and derivatives thereof by the destructive hydrogenation of carbonaceous materials, (P.), B., 45, 86, 273, 312.

production of mixtures of hydrogen and carbon monoxide,

(P.), B., 45. isolation of pure hydrogen from gaseous mixtures, (P.), B., 45.

manufacture of vat dyes of the anthraquinone series, (P.), B., 48, 277.

manufacture of azo-dyes insoluble in water, (P.), B., 48, 637. manufacture of polyazo-dyes, (P.), B., 48.

production of cellulose from flax straw, hemp, jute waste, straw, etc., (P.), B., 50.

manufacture of cellulose derivatives, (P.), B., 50.

manufacture of soluble cellulose esters of higher fatty acids, (P.), B., 51.

printing and discharging, (P.), B., 51. production of hydrocyanic acid, (P.), B., 52.

manufacture of finely-divided iron oxide, (P.), B., 53.

manufacture of solid calcium cyanide and double compounds thereof with ammonia, (P.), B., 53.

production of alumina while simultaneously obtaining hydrochlorie acid and alkali compounds, (P.), B., 54. manufacture of cobalt carbonyl, (P.), B., 54, 393.

recovery of iodine from crude sodium nitrate, (P.), B., 54.

improving the resistance to corrosion of magnesium and magnesium alloys, (P.), B., 60.

I. G. Farbenind. A.-G., drawing section bars from sheets of magnesium alloys, (P.), B., 60. bleaching of artificial fatty acids, (P.), B., 63.

production of raw rubber from rubber latex, (P.), B., 66. preservation and treatment of latex, (P.), B., 66.

manufacture of manures [fertilisers] containing nitrogen and potassium [and free from chlorine], (P.), B., 68

manufacture of a mixed fertiliser containing urea and phosphate, (P.), B., 68.

photochemical production of vitamin-D from ergosterol, (P.),

supplying heat in high-pressure reactions, (P.), B., 78.

apparatus for the [dry] separation of solid substances of different sp. gr., (P.), B., 79.

recovery of oils by high b.p. from the residues of mineral oils, tar oils, etc., (P.), B., 87.

production of metal carbonyls, (P.), B., 95.

separate production of iron, nickel, cobalt, or other metals which form carbonyls, from mixtures containing several such metals, (P.), B., 100.

vessels having an acid-proof lining, (P.), B., 100, 288.

manufacture of lacquers, films, artificial masses, etc., (P.), B., 104.

fungicide, (P.), B., 107.

low-temperature carbonisation of fuels, (P.), B., 119.

production of gases rich in olefines from bituminous coals, (P.), B., 120, 1041.

apparatus for the catalytic conversion of hydrocarbons [into hydrogen and carbon monoxide], (P.), B., 120. manufacture of aqueous solutions of carbon disulphide, (P.),

B., 122. manufacture of hydrocarbons poor in hydrogen, (P.), B., 122.

[catalyst for] manufacture of unsaturated aliphatic hydrocarbons, (P.), B., 122.
manufacture of halogenated hydrocarbon products and analo-

gous substances, (P.), B., 122.

manufacture of aaß-trichloroethane, (P.), B., 122.

[catalysts for] hydrogenation or reduction of organic compounds, (P.), B., 122

manufacture of alcohols, (P.), B., 122. manufacture of acetic anhydride from acetic acid, (P.), B., 122. manufacture of water soluble esters of dicarboxylic acids, (P.), B., 122.

manufacture of o- and p-xylenes, (P.), B., 123.

manufacture of sulphonic acids of 6-chloro-2-amino-1-methyl-

benzene [6-chloro-o-toluidine], (P.), B., 123. manufacture of monobenzoyldiaminoanthraquinones, (P.), B., 123.

manufacture of alkylpyrazolanthrones, (P.), B., 123.

manufacture of valuable products from sorbitol, (P.), B., 123. manufacture of dyes, (P.), B., 124

manufacture of vat [benzanthrone] dyes, (P.), B., 124, 351. manufacture of green vat dyes of the anthraquinone series,

(P.), B., 124.

manufacture of azo-dyes, (P.), B., 124, 239, 351. manufacture of artificial silk, (P.), B., 125.

manufacture of viscose silk, (P.), B., 126.

manufacture of mixed acid esters of cellulose or esters of cellulose ethers, (P.), B., 126.

dyeing with vat dyes sensitive to calcium compounds, (P.),

B., 127. dyeing of artificial silk comprising acyl derivatives or ethers of cellulose or of its conversion products, (P.), B., 127.

electrolysis of brine, (P.), B., 128 dissociation of sulphur vapour, (P.), B., 128.

manufacture of condensation products of urea and form-aldehyde, (P.), B., 138, 180, 728.

manufacture of aminoalkyl ethers of oximes and their salts,

(P.), B., 149. manufacture of basic ethers of resorcinol, (P.), B., 149.

manufacture of 8-hydroxyquinoline and derivatives thereof,

(P.), B., 149. manufacture of ethers of 6:8-dihydroxyquinoline, (P.), B., 149. manufacture of anti-serum for prevention or treatment of

scarlet fever, (P.), B., 150. [treatment of gases from] destructive hydrogenation of coals, tars, mineral oils, etc., (P.), B., 160.

manufacture of valuable hydrocarbons, (P.), B., 161. separation of gaseous or low-boiling hydrocarbons, (P.), B., 161. decolorising or bleaching montan wax, (P.), B., 161, 198.

I. G. Farbenind. A.-G., vaporisation of formamide, (P.), B., 163. manufacture of solid polymerised formaldehyde, (P.), B., 163. catalytic exidation of organic compounds, (P.), B., 163. manufacture of substituted guanidines, (P.), B., 163. recovery of volatile organic solvents, (P.), B., 164.

Naminoalkylation of amines, (P.), B., 164. manufacture of aromatic mercaptans [thiophenols], (P.), B., 164.

manufacture of anthraquinone derivatives, (P.), B., 164. reduction of nitroanthraquinones, (P.), B., 164.

manufacture of aminated sulphurised [i.e., sulphur-containing] benzanthrone derivatives, (P.), B., 164.

manufacture of condensation products of the anthanthrone series, (P.), B., 164.

manufacture of new azo-dyes and intermediate products, (P.), B., 165.

manufacture of brown vat dyes, (P.), B., 165.

manufacture of new o-hydroxyazo-dyes and an intermediate product, (P.), B., 165.

manufacture of [azo-]dyes containing chromium, (P.), B., 165, 317.

manufacture of a black tetrakisazo-dye, (P.), B., 165. new vat dyes of the dipyrazolanthrone series, (P.), B., 165. oxidation of leuco-compounds of the triarylmethane series, (P.), B., 166.

degreasing of raw wool, (P.), B., 167.

manufacture of copper oxide-ammonia cellulose solutions for artificial silk production, (P.), B., 167, 1042

manufacture of ethers of carbohydrates, (P.), B., 167. manufacture of aminocelluloso derivatives, (P.), B., 167. manufacture of alkali cyanides, (P.), B., 171, 813.

uninflammable nitrocellulose lacquers, (P.), B., 180.

manufacture of plastic compositions, lacquers, filling or priming compositions, etc. from nitrocellulose, (P.), B., 180.

manufacture of condensation products from phenols and aldehydes, (P.), B., 180.

production of artificial masses, (P.), B., 180.

preservation of perishable goods, (P.), B., 188. recovery of soluble products from coal, etc., (P.), B., 195. joint manufacture of valuable liquid and other hydrocarbons and derivatives thereof and ammonia, (P.), B., 197.

production of sulphonated products [emulsifying agents, etc.], (P.), B., 197.

production of high-viscosity oils from mineral oils and tar oils

of any origin, (P.), B., 198. production of hydrocarbons of low b.p. from those of high b.p., (P.), B., 198, 588, 843.

manufacture of diolefines, (P.), B., 199, 886.

manufacture of wetting, cleansing, and emulsifying agents, eto., (P.), B., 200, 590.

manufacture of 1:8-naphthoxypenthiophen [perinaphththio-indoxyl] compounds, (P.), B., 200.

manufacture of vat dyes of the anthanthrone series, (P.), B., 201, 674.

production of strips composed of cellulose derivatives carrying

monochromatic or multicoloured figuring, (P.), B., 203. manufacture of derivatives of cork, (P.), B., 204. production of ammonium phosphates, (P.), B., 206. manufacture of white titanic acid [oxide], (P.), B., 207. manufacture of cyanogen chloride, (P.), B., 207.

production of metal coatings on iron or steel or alloys thereof,

(P.), B., 214.

mixed fertilisers, (P.), B., 222, 260, 832.

manufacture of solutions of the active principle of the evary or like glands, (P.), B., 226. manufacture of photographic anti-halation plates or films, (P.),

B., 227. production of liquid hydrocarbons by the carbonisation and

hydrogenation of carbonaceous materials, (P.), B., 232. working-up the oil-bearing residues of destructive hydrogenation of carbonaceous materials or the products obtained by

extraction of substances of the nature of coal, (P.), B., 232. separation of hydrocarbon oils from mixtures thereof with solid substances resulting from industrial processes in which carbonaceous materials are subjected to a heat-treatment, (P.), B., 232.

manufacture of impregnating and adhesive compositions, (P.),

manufacture of olefines and diolefines [butadiene], (P.), B., 235. production of esters, (P.), B., 235.

I. G. Farbenind. A.-G., manufacture of substituted thioglycollio acids, (P.), B., 235, 276.

hydrogenation of open chains containing nitrogen in unsaturated union, (P.), B., 235.

manufacture of aqueous "solutions" of organic compounds insoluble in water, (P.), B., 236.

production of sulphonic acids [wetting, emulsifying, and cleaning agents], (P.), B., 236.

manufacture of disubstituted guanidines, (P.), B., 236. introduction of sulphocyanide [thiocyano-] groups into organic

compounds, (P.), B., 236.
manufacture of N-[hydr]oxycthyl derivatives of 4-aminol-[hydr]oxybenzene [p-aminophenol], (P.), B., 236.

manufacture of substituted indoles, (P.), B., 237. manufacture of new carboxylic acids of the fatty-aromatic series,

(P.), B., 237.

manufacture of benzanthraquinone derivatives and substitution products, (P.), B., 237.
manufacture of dibenzanthrone, (P.), B., 237.

manufacture of vat dyes [of the dibenzanthrone series], and

intermediate products thereof, (P.), B., 238. manufacture of vat dyes, (P.), B., 238, 277, 351, 388, 808.

manufacture of new azo-dyes, (P.), B., 238, 591.

manufacture of arylazodiarylamines [dyes for wool and acetate silk], (P.), B., 239.

manufacture of a black trisazo-dye, (P.), B., 239.

manufacture of nitrosoamine printing colours, (P.), B., 239, 281. protection of materials such as wool, fur, etc., from the ravages of moth, (P.), B., 241.

treatment of hydrated cellulose, (P.), B., 242, 892. conversion of nitrocelluloses which yield highly viscous solutions

into nitrocelluloses which yield solutions of low viscosity, (P.), B., 242.

production of high-grade knifing compositions and mixed lacquers containing them; production of knifing compositions, (P.), B., 242.

machinery for softening or loosening artificial fibrous materials, (P.), B., 243.

simultaneous production of phosphorus or phosphoric acid and binding agents having fatent hydraulic properties, (P.), B., 244.

recovery of metals and metal compounds which are soluble in ammoniacal liquors, (P.), B., 250.

manufacture of synthetic tanning agents, (P.), B., 258, 904. manufacture of alkylaminoalkylamino-derivatives of aromatic compounds, (P.), B., 264.

multi-stage apparatus for mixing, stirring, emulsifying, etc., (P.), B., 268.

carrying out exothermic catalytic gas reactions and apparatus therefor, (P.), B., 269.

manufacture of valuable products from montan wax, (P.), B., 273.

manufacture of lubricating and insulating oils, (P.), B., 274. scavenging the residues of combustion deposited on the sliding surfaces of internal-combustion engines operated by pulveru-

lent fuel, (P.), B., 274.

manufacture of hydrocarbon derivatives and of unsaturated hydrocarbons, (P.), B., 275.

manufacture of organic bases, (P.), B., 275. manufacture of hexahydroaniline [cyclohexylamine], (P.), B., 276.

manufacture of aromatic [hydr]oxyaldehydes, (P.), B., 276. manufacture of 2:3-aminonaphthol and derivatives thereof, (P.), B., 276.

manufacture of [hydr]oxydiaryl ketones, (P.), B., 276. manufacture of naphthol ether carboxyamides [alkoxynaphth-

amides] and aminonaphthol ethers, (P.), B., 276. manufacture of salts of acid sulphuric esters of nitro-9:10-di-hydroxyanthracenes, (P.), B., 276. manufacture of new solid diazo-azo-compounds, (P.), B., 276.

manufacture of acetylcellulose, (P.), B., 280. precipitation of viscose solutions, (P.), B., 280.

production of reserves on wool and silk, (P.), B., 281. mercerisation of vegetable materials with alkaline liquids, (P.),

manufacture of hydrogen cyanide from cyanides of the alkali

metals, (P.), B., 282. means for obtaining crystals of uniform coarse grain, especially of fertiliser salts, (P.), B., 282.

production of green hydrated chromium oxide, (P.), B., 283.

I. G. Farbenind. A.-G., manufacture of pure hydrated chromic chloride, (P.), B., 283. decomposition of chromium ore and manufacture of chromium compounds free from iron, (P.), B., 288. silicon-containing magnesium alloys for use with pistons for internal-combustion engines, (P.), B., 288. manufacture of liquid or solid products by gaseous reaction under the influence of silent electrical discharge, (P.), B., 290. cold frames and similar transparent roofings for use especially in horticulture, (P.), B., 298 manufacture of solutions of the active principle of organs or glands with internal secretion, (P.), B., 302. manufacture of optically active phenylpropanolmethylamines [ $\beta$ -methylamino- $\alpha$ -phenyl-n-propyl alcohols; l-ephedrine], (P.), B., 302. manufacture of urethancs [carbamates] of secondary alcohols, (P.), B., 302. manufacture of arsenobenziminazolones, (P.), B., 303. improvement of perfumes, (P.), B., 303. multi-stage mixer, (P.), B., 307. treatment of coke-oven gas, coal gas, or similar gases, parti-cularly for the purpose of obtaining acctylene, (P.), B., 313. increasing the viscosity and improving the lubricating properties of oils, (P.), B., 314.
means for hardening paraffins, waxes, ozokerite, stearine, tallow, etc., (P.), B., 314. manufacture of acetaldehyde and acetic acid, (P.), B., 315. production of hydroxyalkylamines ["triethanolamine," etc.], (P.), B., 315. production of sulphonic acids [of unsaturated aliphatic or alicyclic hydrocarbons], (P.), B., 315. manufacture of aromatic hydrocarbons, (P.), B., 316. manufacture of o-aminoarylmercaptans [o-aminothiophenols], (P.), B., 316. manufacture of diacidyl derivatives of naphthalene and acenapthene, (P.), B., 316 manufacture of o-cyanoarylthioglycollic acids and intermediate products, (P.), B., 316. manufacture of complex metal compounds of o-hydroxyazodyes, (P.), B., 317. production of new coloured compounds and of valuable colorations and impressions on cellulose esters or ethers, (P.), manufacture of dyes of the anthracene series, (P.), B., 317. manufacture of objects of acid-proof material, (P.), B., 320. manufacture of coloured compositions from cellulose esters, etc., (P.), B., 320. dyeing of cellulose esters and ethers, (P.), B., 320. treatment of calcium compounds with sulphuric acid or its salts, (P.), B., 322. manufacture of hollow articles of quartz, etc., (P.), B., 323. improving the hydraulic properties of Portland cement, (P.), production of iron powder of high purity and small grain size, (P.), B., 329. manufacture of thiosemicarbazones of arsenophenol-aldehydes or -ketones, (P.), B., 339. manufacture of hormones having a heart-stimulating action, or of extracts containing such hormones, (P.), B., 340. low-temperature carbonisation of bituminous and oil-bearing materials, (P.), B., 347. manufacture of hydrocarbons of low b.p., (P.), B., 347. production of products from brown coal analogous to montan wax, (P.), B., 348. manufacture of synthetic organic compounds [from carbon oxides], (P.), B., 349. manufacture of o-nitro- and o-amino-diaryl ethers, (P.), B., 349. production of aromatic carboxylic acids, (P.), B., 349. manufacture of hydrogenated aromatic amino-compounds, (P.), B., 350. manufacture of condensation products of dimethylolurea or dimethylolthiourea, (P.), B., 350. manufacture of condensation products of the benzanthrone series, (P.), B., 350, 889. manufacture of insoluble [azo-]dyes, (P.), B., 351, 552. manufacture of indigoid vat dyes, (P.), B., 352, manufacture of sulphur dyes, (P.), B., 352, 809, 890. manufacture of cellulose ethers, (P.), B., 353\*. dyeing of animal fibres, (P.), B., 353.

production of fast dyeings and printings, (P.), B., 353.

I. G. Farbenind. A.-G., production of finely-divided sulphur, (P.), B., 355. manufacture of synthetic resins and of varnishes therefrom, (P.), B., 366. production of rubber, (P.), B., 367. manufacture of artificial rubber, (P.), B., 367, 652, 903. fertilisers, (P.), B., 371. manufacture of derivatives of hydroxy-compounds containing mercury in the nucleus, (P.), B., 377. manufacture of pharmaceutical products [salts of heterocyclic bases], (P.), B., 377. manufacture of benziminazolonearsinic acids, (P.), B., 377 reversal process for developing photographic silver sensitised films, (P.), B., 378 increasing the yield in photochemical gas reactions, (P.), B., 385 apparatus for carrying out photochemical gas reactions, (P.), B., 385. manufacture of sulphonic acids of N-acetoacetylated arylamines [acetoacetic sulphoarylamides], (P.), B., 387. production of water-glass solutions, (P.), B., 393. manufacture of metallic nitrates, (P.), B., 393. manufacture of anhydrous metallic chlorides, (P.), B., 393. production of hydrogen and gas mixtures containing the same, (P.), B., 393. preparing lead electrodes for electric storage batteries, (P.), B., 401. manufacture of hardened casein products, (P.), B., 406. preparation of photosensitive photographic emulsions, (P.), recovery of valuable organic products from solid carbonaceous materials, (P.), B., 423. treatment of coal and other solid carbonaceous materials for production of liquid hydrocarbons or other organic substances, (P.), B., 423. manufacture of hydrocarbons and especially those of low b.p., (P.), B., 423. cracking of oils, (P.), B., 424. extraction of oils from carbonaceous material by means of solvents under pressure, (P.), B., 424. manufacture of liquid hydrocarbons from olefines, (P.), B., 424. production from montan wax of valuable products suitable for fixing solvents used in shoe creams, etc., B., 425. manufacture of piece-dyed tissues, (P.), B., 430. treatment of animal or vegetable textile materials, (P.), B., 430. manufacture of nitric and sulphuric acids, (P.), B., 431. purification of caustic alkali solutions, (P.), B., 432. manufacture of cyanides, (P.), B., 433. insulation and securing of coil windings of lacquered wire, (P.), B., 441. manufacture of water-soluble products from commercial fatty acids obtained from raw wool fat, (P.), B., 442. stuffing of leather, (P.), B., 446. apparatus for the cultivation of micro-organisms and for carrying out aërobic fermentation, (P.), B., 450. carrying out of reactions at high pressures and temporatures, (P.), B., 457. drying apparatus, (P.), B., 458. treating liquids with gases or vapours, (P.), B., 459. low-temperature carbonisation of fuels, (P.), B., 465. destructive hydrogenation of carbonaceous materials, (P.), B., 465. manufacture of valuable liquid products from varieties of coal, tars, mineral oils, etc., (P.), B., 465, 546. recovery of oxidation products of solid hydrocarbons, waxes, etc., (P.), B., 466. manufacture of organic compounds containing oxygen, (P.), B., 467. manufacture of 2-aminonaphthalene-3-carboxylic [2-amino-3-naphthoic] acid, (P.), B., 467. manufacture of cellulose esters, (P.), B., 469, 593, 594, 1011. reeling of artificial threads, (P.), B., 469. production of alkali nitrates from alkali chlorides, (P.), B., 471. production of rubber from rubber latex, (P.), B., 484 manufacture of synthetic rubber, (P.), B., 485, 652, 991. apparatus for carrying out exothermic gas reactions, regenerating heat, and cooling the walls of the said apparatus, (P.),

manufacture of water-soluble products from lignite and similar

B., 495.

fossil materials, (P.), B., 505.

I. G. Farbenind. A.-G., operation of internal-combustion engines with pulverulent fuel, (P.), B., 505, 968.

elimination of sulphur compounds from gases, (P.), B., 506. apparatus for production of carbon disulphide, (P.), B., 510.

spinning of artificial silk, (P.), B., 513, 810.

apparatus for treatment of webs or sheets of paper or textile or other material with chemicals or colouring matters to other fluids, (P.), B., 514.

manufacture of alkali nitrates, (P.), B., 516, 977.

liquefaction of oxides of nitrogen, (P.), B., 517. manufacture of electrolytic zinc, (P.), B., 525.

production of porous metal articles from metal powder, (P.), B., 526.

manufacture of electrodes for Edison accumulators, (P.),

B., 527.

production and application of plates for electric condensers, etc., (P.), B., 527 production of stable [colour] pastes and lakes, (P.), B., 530. manufacture of photographic silver-salt emulsions, (P.),

B., 539, 577. production of photo-prints and photo-copies, (P.), B., 539. apparatus for filling solid articles in layers into receptacles,

(P.), B., 545.

liquefying and solubilising coals by extraction with solvents

under pressure, (P.), B., 546 manufacture of valuable liquid hydrocarbons, (P.), B., 547.

extraction of acetylene from gases, (P.), B., 547.

extraction of oils from materials containing the same, (P.), B., 547.

manufacture of methyl alcohol, (P.), B., 549. manufacture of mono- and poly-hydric alcohols, (P.), B., 549. manufacture of new compounds containing sulphur, (P.), B., 549.

production of aldehyde-sulphoxylates, (P.), B., 549.

manufacture of methylol [hydroxymethyl] derivatives of urethanes, (P.), B., 549.

manufacture of alkali salts of nitrosoamines of primary aromatic amines, (P.), B., 550.

manufacture of monohalogenated naphthastyril compounds,

(P.), B., 550. manufacture of [black benzanthrone] vat dyes, (P.), B., 551. manufacture of [black dibenzanthrone] vat dyes, (P.), B., 551. manufacture of sulphur dye pastes, (P.), B., 551.

manufacture of monoazo-dyes [for wool and acetate silk], (P.),

B., 551. manufacture of [direct green] azo-dyes, (P.), B., 551.

manufacture of fast azo-dyes, (P.), B., 552.

manufacture of [solubilised o-hydroxy] azo-dyes, (P.), B., 552. manufacture of [violet] indigoid vat dyes, (P.), B., 552.

weighting of natural silk, (P.), B., 555.

treatment of magnesium and its high-percentage alloys in the molten state, (P.), B., 562.

manufacture of therapeutically active basic nitro-derivatives

of 9[10]-aminoacridine, (P.), B., 577.
manufacture of stable medicinally active salts of p-aminophenylstibinic acid, (P.), B., 577.

low-temperature carbonisation of bituminous material, (P.),

B., 587.

apparatus for manufacture of fuel gas, (P.), B., 587. separation of oils from mixtures of the same with solid substances, (P.), B., 589.

manufacture of liquid hydrocarbons, (P.), B., 589. production of butadiene hydrocarbons, (P.), B., 589.

manufacture of materials from or comprising [wax-like] chlorinated hydrocarbons, (P.), B., 590.

manufacture of arylaminonaphthalene derivatives, (P.), B., 590.

manufacture of 2-aminonaphthalene-3-carboxylic [2-amino-3-naphthoic] acid and of intermediate compounds, (P.), B., 590.

manufacture of condensation products of the pyrenequinone series, (P.), B., 590.

manufacture of cyclic ketones, polycyclic ketones, and quinones, (P.), B., 590.

manufacture of vat dyes of the 2-thionaphthen-3-indoleindigo series, (P.), B., 591.

manufacture of products [acid dyes] of the anthraquinone series, (P.), B., 591.

manufacture of vat dyes of the pyrenequinone series, (P.), B., 591.

I. G. Farbenind. A.-G., manufacture of [water-soluble] azo-dyes [for lakes and wool dyeing], (P.), B., 591.

improving the spinning properties of cotton, (P.), B., 593. manufacture of mothproofing media and protection of wool, skin, material, textiles, etc., against insects, (P.), B., 593.

production of viscose, (P.), B., 594.

production of compounds resembling celluloid, (P.), B., 594. manufacture of [waterproof] artificial material and articles from alkyl cellulose, (P.), B., 595.

electrolytic production of metals and apparatus therefor, (P.),

B., 604.

production of neutral fats and oils, (P.), B., 608.

manufacture of water-soluble or emulsifiable products from wool fat, (P.), B., 608.

manufacture of soap and saponaceous materials, (P.), B., 608. preparations for printing, painting, coating, or impregnating surfaces, (P.), B., 609.

driers for varnishes, lacquers, oil paints, etc., (P.), B., 610. preparation of products of latox-like character, (P.), B., 612. distilling liquids by introduction of another liquid into the heated liquid to be distilled, (P.), B., 627.

gas producers having means for removal of residues therefrom, (P.), B., 631.

desulphurisation of gases, (P.), B., 632.

separation from solid residues of oils obtained in the destructive hydrogenation of coal, tars, mineral oils, etc., (P.), B., 633.

manufacture of hydrocarbons, (P.), B., 633. obtaining gaseous and low-boiling olefines and diolefines from

bituminous coal, tars, mineral oils, etc., (P.), B., 634. catalytic conversion of mixtures of carbon monoxide and

hydrogen into valuable organic compounds containing more than one carbon atom in the molecule, (P.), B., 634. manufacture of organic oxygen compounds [ketones, acids],

(P.), B., 635. oxidation of aliphatic compounds of high mol. wt., (P.), B., 636. manufacture of reduction products of vat dyes and other

reducible organic compounds, (P.), B., 636.

manufacture of condensation products from [phenols and] unsaturated higher fatty acids or their glyceryl esters, (P.), B., 636.

manufacture of condensation products of the anthraquinone series [1:1'-dihydroxy-2:2'-dianthraquinonyl], (P.), B., 637. manufacture of condensation products of the anthraquinone series [dibenzpyrenequinones], (P.), B., 637.

manufacture of derivatives of the anthraquinone series containing nitrogen [dyes for acetate silk], (P.), B., 637.

manufacture of [nitro-]dyes [for wool], (P.), B., 637.

manufacture of cotton [azo-]dyes [and pigments], (P.), B., 637. manufacture of complex chromium compounds of azo-dyes, (P.), B., 638.

manufacture of solutions for dyeing purposes, (P.), B., 639. dyeing of cellulose derivatives, (P.), B., 639.

production of water-resisting colouring on pellicles of cellulose derivatives, (P.), B., 639.

washing, dyeing, carbonising, and otherwise treating textiles, (P.), B., 639.

manufacture of silicic acid sols, (P.), B., 642.

manufacture of complex tungsten and molybdenum compounds [and pigments, colour lakes, etc. containing them], P.), B., 643.

partitions for separating the electrolytic products in the fusion electrolysis of chlorides, particularly of magnesium, (P.), B., 650, 824.

manufacture of polymerisation products of diolefines, (P.), B., 652.

manufacture of glutinous products [adhesives], (P.), B., 653. manufacture of tuberculin preparations, (P.), B., 661.

manufacture of organic arsenic preparations and the application

thereof as seed grain immunising media, (P.), B., 661 purification of alcohols obtained by the catalysed interaction

of hydrogen with oxides of carbon, (P.), B., 670. manufacture of acetaldehyde from acetylene or gaseous mixtures containing it, (P.), B., 670.

manufacture of anhydrous acetic acid from its aqueous solutions, (P.), B., 671.

concentration of aqueous acetic acid, (P.), B., 671.

dehydration of vapour mixtures containing acetic anhydride and water, (P.), B., 671.

production of mono- or poly-hydric alcohols, (P.), B., 671. purification of synthetic butyl alcohol, (P.), B., 671.

I. G. Farbenind. A.-G., manufacture of gaseous and readily volatile olefines from hydrogen and oxides of carbon, (P.), B., 671. manufacture of 1:3[y]-butylene glycol, (P.), B., 671. [catalysts for] carrying out organic dehydration reactions, (P.), B., 672 manufacture of chlorinated compounds of the benzene series, (P.), B., 672. manufacture of indophenols, (P.), B., 672. manufacture of [intermediate] compounds having affinity for cotton [ico and developing colours], (P.), B., 672 manufacture of new intermediates [arylamides of 2:3-hydroxy-naphthoic acid] and azo-dyes therefrom, (P.), B., 673. manufacture of o halogenoanthraquinonecarboxylic acids, (P.), B., 673. manufacture of [thioindigoid] vat dyes, (P.), B., 674. manufacture of azo-dyes [for wool and lakes], (P.), B., 674, manufacture of yellow monoazo-dyes [for wool], (P.), B., 675. manufacture of azo-dyes [ico colours], (P.), B., 675, 846. manufacture of azo-dyes [violet ico and pigment colours], (P.), B., 675. manufacture of [blue to violet] azo-dyes insoluble in water, (P.), B., 675. manufacture of substantivo azo-dyes, (P.), B., 675. manufacture of artificial products from celluloso derivatives, (P.), B., 677. colouring, sizing, impregnating, or otherwise treating paper, (P.), B., 678. production of fast blue dyeings on the [cotton] fibre; [aftercoppering of triazo-dyes], (P.), B., 678. manufacture of black dyeings with white or coloured effects on acetato silk, (P.), B., 678. dyeing of artificial silk from esters and others of cellulose and its conversion products, (P.), B., 678. continuous production of fused caustic alkalis, (P.), B., 680. manufacture of finely-divided ferrio oxide, (P.), B., 680. conversion of salts, especially fertilisers and the like, into globular or similar shaped bodies, (P.), B., 680. manufacture of magnesium cyanido and its double compound with ammonia, (P.), B., 681. carrying out photochemical reactions with dissolved reaction materials, (P.), B., 688. nitrocellulose-oxyn solutions particularly for use as lacquers or varnishes, (P.), B., 691. preparation of surfaces for the reception of cellulose lacquers, (P.), B., 691. manufacture of [oily or resinous] condensation products from urea, thiourea, or their derivatives, and an alcohol or ketone, (P.), B., 691. manufacture of complex [organic] metallic salts, (P.), B., 699. manufacture of organic antimony compounds, (P.), B., 699. manufacture of stable solutions of salts of stibinic acids, (P.), manufacture of aromatic polyhydroxy-compounds containing mercury, (P.), B., 700. washing of gases and vapours, (P.), B., 702. manufacture of fuel gas and similar combustible gases and apparatus therefor, (P.), B., 705. operating with gases containing carbon monoxide at elevated temperatures, (P.), B., 706. separation of oils from mixtures with solid substances, (P.), B., 706. production of low b.p. and other hydrocarbons and derivatives thereof by the destructive hydrogenation of coals, oils, etc., and treatment of the residues, (P.), B., 706. manufacture of suspensions and emulsions, (P.), B., 708. production of acidyl derivatives [O-esters] of hydroxyalkyl ethers of polyhydrio alcohols, (P.), B., 708. production of acetaldehyde from acetylene, (P.), B., 708. manufacture of acetone, (P.), B., 708. manufacture of organic bases and pest-destroying agents therefrom, (P.), B., 709. manufacture of new aromatic N-aminoalkylaminoaldehydes and derivatives thereof, (P.), B., 709. manufacture of condensation products of the benzodiazine [quinazoline] series, (P.), B., 709, 747, 935. manufacture of nitrogenous vat dyes [of the dibenzanthrone series], (P.), B., 710.

manufacture of nitrogenous [vat] dyes [of the pyranthrone

series], (P.), B., 710.

pigments], (P.), B., 711, 890. manufacture of insoluble azo-dyes [ice colours and pigments], (P.), B., 711. manufacture of azo-dyes [blue to violet ice colours and pigments], (P.), B., 711 manufacture of [thioindigoid] vat dyes and intermediate products, (P.), B., 711.
manufacture of coloured [resinous or plastic] compositions or solutions of the same; [dyeing of acctate silk], (P.), B., 712. removal of sulphur from articles made from viscose, (P.), B., 714. working up of ethylcellulose, (P.), B., 714. making bands of artificial fibres, (P.), B., 715. production of non-corrosivo and heat-resisting surfaces on iron, P.), B., 725. refining of chromium ores, (P.), B., 725. manufacture of bleached pure wool fat, (P.), B., 727. manufacture of refined products from wool fat, (P.), B., 727. manufacture of products from resins, (P.), B., 728. manufacture of tubercle waxes free from any tubercle bacilli and from tuberculin, (P.), B., 737. manufacture of photographic anti-halation coatings, (P.), B., 738. photographic descusitisers, (P.), B., 738. removal [by suction] of solid combustion residues from internalcombustion engines operated with pulverulent fuel, (P.), B., 746. manufacture of phenol from chlorobenzene, (P.), B., 746. manufacture of 4-amino-1-oxybenzone [p-aminophenol] and N-derivatives thereof, (P.), B., 746. manufacture of oxygenated organic compounds, (P.), B., manufacture of condensation products from alicyclic ringkotones, (P.), B., 746. manufacture of condensation products from hydroxybenzenes [phenols] and hydroaromatic ring ketones [cyclohexanones], P.), B., 747. manufacture of hydrogenated hydroxy-derivatives of the diphenyl series, (P.), B., 747. manufacture of aniline-2:5-disulphonic acid, (P.), B., 747. manufacture of organio [quinoline] bases [from arylamines and acetyleno], (P.), B., 747. manufacture of cyclic compounds containing aldehydic groups, (P.), B., 747. manufacture of 2:3-aminonaphthoic acid, (P.), B., 748. manufacture of compounds of the anthracene series [nitrotetrahydroanthraquinones], (P.), B., 748. manufacture of benzanthrone derivatives, (P.), B., 748. manufacture of benzanthrone-peri-[3:4-]dicarboxylio acid or its derivatives, (P.), B., 748. manufacture of condensation products [thiazoles] of the benzanthrone series, (P.), B., 748. manufacture of mordant [azo-]dyes, (P.), B., 748. manufacture of now basic azo-dyes, (P.), B., 748. manufacture of [direct dis]azo-dycs [for cotton and viscoso silk], (P.), B., 749. manufacture of mixed esters of cellulose and of conversion products thereof, (P.), B., 750.
[roller machine for] colouring, sizing, impregnating, or otherwise treating paper [on one surface], (P.), B., 750. production of resistant silver surfaces, (P.), B., 781. welded joints, (P.), B., 802. manufacture of hydrocarbons, (P.), B., 804. manufacture of unsaturated hydrocarbons, (P.), B., 804, 844, 886. desulphurisation of hydrocarbons, (P.), B., 804. production of montan wax compositions, (P.), B., 804. refining crudo paraffin, etc., (P.), B., 804. manufacture of crotyl [β-butenyl] bromide, (P.), B., 806. manufacture of butadiene, (P.), B., 806. manufacture of monocarboxylic acids, (P.), B., 807. recovery of organic acids from oxidation products of paraffin hydrocarbons, waxes, etc., (P.), B., 807. manufacture of 4-(p-oxyethylamino)-1-oxybenzene [p-β-hydroxyethylaminophenol], (P.), B., 807. manufacture of sulphur-containing hydroxyquinones, (P.), B., 807.

I. G. Farbenind. A.-G., manufacture of azo-dyes [ico colours and

I. G. Farbenind. A.-G., manufacture of hydroxythionaphthens [thioindoxyls], (P.), B., 808.
manufacture of condensation products and vat dyes of the benzanthrone series, (P.), B., 808.

manufacture of 1-aminoanthraquinone-2-sulphonic acid, (P.),

B., 808. manufacture of condensation products of the anthraquinone series, (P.), B., 808.

manufacture of [thioindigoid] vat dyes, (P.), B., 808. manufacture of azo-dyes capable of after-treatment with metallic salts, (P.), B., 809.

manufacture of dis- and poly-azo-dyes [for cotton], (P.),

B., 809. spinning of artificial threads, (P.), B., 811.

cloth printing, (P.), B., 811. absorption of dilute nitrous gases, (P.), B., 813.

manufacture of metal sulphates from sulphides and its applic-

ation to gas purification, (P.), B., 814.
[electrolytic] manufacture of [per-]compounds containing active oxygen, (P.), B., 814.

production of light [insulating] bricks, (P.), B., 817.

improvement of porous materials by impregnation, (P.), B., 817.

manufacture of finely-divided metals, (P.), B., 821. manufacture of accumulator plates, (P.), B., 823.

amalgam cells for electrolysis [of alkali or alkaline-carth

chlorides], (P.), B., 824. treatment of synthetic resins and particularly of coatings thereof, (P.), B., 826.

manufacture of new resin-like products, (P.), B., 827.

manufacture of artificial rubber or rubber substitutes, (P.), B., 829.

manufacturo of artificial rubber or rubber-like masses, (P.), B., 829.

manufacture of vulcanised rubber, (P.), B., 829.

vulcanisation of rubber, (P.), B., 830.
manufacture of basic phenol alkyl ethers, (P.), B., 835.

manufacture of betaine thiocyanate, (P.), B., 835. manufacture of vitamin-D, (P.), B., 836.

manufacture of growth-promoting substances for animal cells, suitable for use in medicine and surgery and for the cultiv-

ation of tissues, (P.), B., 836. prevention and removal of boiler scale, (P.), B., 836.

carrying out of gas reactions, (P.), B., 837.

mechanical device for regulating the quantity and composition of a gas mixture, (P.), B., 840.

cold asphalt and application thereof, (P.), B., 843.

manufacture of a stable diazo-compound, (P.), B., 845. manufacture of hydroxythionaphthens [thioindoxyls] and of

vat dyes therefrom, (P.), B., \$45. manufacture of dyes of the diaminotriphenylmethane series,

(P.), B., 845. manufacture of dyes of the anthraquinone series [for wool or

acetate silk], (P.), B., 845. manufacture of vat dyes [of the dibenzanthrone series], (P.), B., 845.

manufacture of complex metal compounds of azo-dyes, (P.),

B., 846. manufacture of complex chromium compounds of azo-dyes, (P.), B., 846.

manufacture of chromiferous dyes, (P.), B., 846.

manufacture of substantive trisazo-dyes, (P.), B., 846. production of resist effects in dyeing with vat dyes, (P.),

B., 849. manufacture of hydrogen peroxide by cathedic reduction of

oxygen, (P.), B., 850. production of aluminium chloride free from iron, (P.), B., 851.

manufacture of titanium compounds, (P.), B., 851. improving the resistance to corrosion of magnesium and magnesium alloys, (P.), B., 857.

manufacture of potassium, (P.), B., 857.

measuring the humidity of gases or gaseous mixtures, (P.), B., 859.

production of solid [lubricating] greases, (P.), B., 862.

coating surfaces with cellulose varnishes, (P.), B., 863. production of transfer pictures and their application for improving wood and other surfaces, (P.), B., 863. manufacture of plastic and elastic polymerisation products of

diolefines, (P.), B., 864. grain immunising media, (P.), B., 866. I. G. Farbenind. A.-G., manufacture of preparations having an action resembling that of tuberculin, (P.), B., 871, 1032.

[automatic convoyor] apparatus for filling solid articles [tablets, pills, etc.] into receptacles, (P.), B., 877. recovery [from hydrogenated coal products] of organic sub-

stances which are volatilisable at an elevated temperature and apparatus therefor, (P.), B., 879. manufacture of water-gas, (P.), B., 880.

manufacture of low-boiling and gaseous hydrocarbons from those of higher b. p., (P.), B., 882.

manufacture of lubricating oils, (P.), B., 883.

dehydration of moist fuels and liquid heavy hydrocarbon oils, (P.), B., 885.

manufacture of divinyl and homologues thereof, (P.), B., 886. manufacture of etherified polyhydric alcohols and derivatives thereof, (P.), B., 886.

manufacture of organic compounds from oxides of carbon and hydrogen, (P.), B., 887.

manufacture of chloroacetaldehyde, (P.), B., 887. manufacture of 1-aminocarbazole and derivatives thereof,

(P.), B., 888.

manufacture of aqueous diazonium salt solutions, (P.), B.,

hydrogenation of homologues of aniline and monoamino-com-pounds of aromatic hydrocarbons containing condensed benzene nuclei, (P.), B., 888.

manufacture of condensation products from aldehydes and phenols [moth-proofing materials], (P.), B., 888. manufacture of nitro-compounds of dinaphthyleno dioxide and

derivatives thereof, (P.), B., 889. manufacture of alkoxyacridinium compounds, (P.), B., 889.

manufacture of 4-chloro-l-aminoanthraquimone-2-sulphonic acid, (P.), B., 889.

manufacture of vat dyes of the a-naphthaquinone scries, (P.), B., 890.

manufacture of dyes of the anthraquinone series, (P.), B.,

manufacture of [direct, developing] azo-dyes, (P.), B., 890. manufacture of azo-dyes forming metallic salts, (P.), B., 891. manufacture of [waterproof] vulcanised fibre, (P.), B., 892. manufacture [spinning] of artificial silk [of fine titer], (P.), В., 893.

dressing of artificial silk, (P.), B., 894.

apparatus for washing and after-treatment of artificial threads spun on spools, bobbins, or other carriers, (P.), B., 895. colouring, sizing, impregnating, and similarly treating paper,

(P.), B., 895. manufacture of phosphoric acid, (P.), B., 896. charging of electrical furnaces, (P.), B., 901.

manufacture of insulated articles for electrical engineering purposes, (P.), B., 901.

manufacture of lead or lead peroxide electrodes for accumulators, (P.), B., 902.

manufacture of a substance containing silver chloride in the colloidal state, (P.), B., 911.

production of antirachitic products, (P.), B., 911.

providing photographic raw film with visible reproducible inscriptions, (P.), B., 912. tropical packing for photographic plates, films, and papers,

(P.), B., 912. manufacture of oxygenated organic compounds, (P.), B., 917. manufacture of pure iron, (P.), B., 922.

manufacture of iron alloys from pulverulent initial materials, (P.), B., 922.

colouring of spirit varnishes, (P.), B., 924.

manufacture of viscous oils from brown-coal tars or their distillation products, (P.), B., 932.

gas producers, (P.), B., 932.
manufacture of N-[hydr]oxyothyl derivatives of 2-amino1-oxybenzeno [o-aminophenol], (P.), B., 935.
dyeing of cellulose derivatives, (P.), B., 938.

treatment of textile materials, (P.), B., 938. catalytic reactions, (P.), B., 939.

manufacture of silica or masses containing the same, (P.),

manufacture of sulphonated derivatives of unsaturated fatty acids, (P.), B., 947.

liquors for use in tanning or treating leather, and their application, (P.), B., 950.

insecticides, (P.), B., 951.

I. G. Farbenind. A.-G., manufacture of pharmaceutical products. (P.), B., 958.

providing photographic raw film with visible reproducible inscriptions, (P.), B., 961.

extinguishing fire, (P.), B., 964. viscosimeter, (P.), B., 965.

manufacture of carbon, (P.), B., 968.

purification of gas containing sulphuretted hydrogen, (P.), B., 969.

manufacture of emulsions of diolefines, (P.), B., 972. manufacture of ketones [from glycols], (P.), B., 972. manufacture of homologues of dioxan, (P.), B., 973.

manufacture of 5:7-dialkoxy-3-[hydr]oxythionaphthens [thioindoxyls] and of dyes therefrom, (P.), B., 973.

manufacture of substances resembling cork, (P.), B., 976. treatment with liquid of fibres wound on permeable spools. (P.), B., 977.

production of concentrated nitric acid from dilute solutions, (P.), B., 977.

recovery of nitric acid [from solutions containing other volatile acids], (P.), B., 977.

production of porous building materials from mineral binding media, (P.), B., 980.

manufacture of fertilisers, (P.), B., 993.

[solutions for the] cultivation of micro-organisms, (P.), B., 994. manufacture of o-hydroxybenzylaminearsinic acids and their aroyl derivatives, (P.), B., 997.

[heat] treatment [and carbonisation] of solid, and especially bituminous, substances, (P.), B., 1005.

elimination of sulphur compounds from gases, (P.), B., 1006. conversion of hydrocarbons of high b.p. range into others of

low b.p. range, (P.), B., 1006.
manufacture of hydrocarbons, particularly those of low b.p., (P.), B., 1006.

manufacture of ethers or esters of carbohydrates of the type  $(C_6H_{10}O_6)_x$ , (P.), B., 1011. printing on wool, (P.), B., 1012.

manufacture of calcium cyanide, (P.), B., 1014.

production of alkali phosphates and ammonium phosphates, (P.), B., 1014.

purification of metallic salt solutions contaminated by organic substances, (P.), B., 1014. production of hydrogen from methane, (P.), B., 1014.

employment of cerium in the production of steel and iron, (P.), B., 1019.

production of metals [iron, by the carbonyl process], (P.), B., 1019.

manufacture of shaped pieces consisting of homogeneous alloys of lead with alkali or alkaline-earth metals, (P.), B., 1019. production of metal plates and sheets for offset printing, (P.),

B., 1020. manufacture of artificial compositions, especially those resem-

bling rubber, (P.), B., 1024. manufacture of fertilisers containing ammonium nitrate, (P.).

B., 1026. manufacture of hydrocarbons from coal, tars, mineral oils, etc.,

(P.), B., 1041. production of anhydrous aluminium chloride, (P.), B., 1044. manufacture of yellow ferric hydroxide, (P.), B., 1044. manufacture of [bleachable] printer's inks, (P.), B., 1047.

manufacture of condensation products of derivatives of urea and aldehydes, (P.), B., 1047.

[lacquer-]printing process, (P.), B., 1047.

I. G. Farbenind. A.-G., and Bencker, F., manufacture of alkali of high concentration, (P.), B., 642.

I. G. Farbenind. A.-G., and Blumrich, K., manufacture of calcium nitrate, (P.), B., 208\*.

I. G. Farbenind. A.-G., Bonrath, W., and Schepss, W., manufacture of disinfecting, bactericidal, insecticidal, fungicidal, and vermin-destroying preparations, (P.), B., 266.

I. G. Farbenind. A.-G., and Carpmael, A., manufacture of new derivatives of aromatic amino-[hydr]oxy- and polyaminocompounds, (P.), B., 265.

manufacture of 8-amino-6-alkoxyquinolines, (P.), B., 550. reduction of aromatic nitro-compounds, (P.), B., 746.

I. G. Farbenind. A.-G., Carpmael, K., and Carpmael, K. S., manufacture of dyes of the pyrone series, (P.), B., 124. manufacture of chromium compounds, (P.), B., 597.

I. G. Farbenind. A.-G., and Curs, A., refining process [for iron], (P.), B., 214.

I. G. Farbenind. A.-G., Daimler, K., Just, F., Balle, G., and Fuchs, S., disinfecting agent, (P.), B., 266.

I. G. Farbenind. A.-G., and Dobmaier, K., manufacture of solid alkali-metal salts of organic compounds, (P.), B., 200. I. G. Farbenind. A.-G., Doerinckel, F., and Schliemann, M.,

preparation of anhydrides of organic acids, (P.), B., 11\*.

I. G. Farbenind. A.-G., Drossbach, O., and Jordan, O., cellulose composition, (P.), B., 13.

I. G. Farbenind. A.-G., Drucker, J., and Thienemann, H., activation of carbon, (P.), B., 705.

I. G. Farbenind. A.-G., Ebert, C., and Becker, T., manufacture of cellulose esters and conversion products therefrom, (P.), B.,

I. G. Farbenind. A.-G., and Eisenhut, O., recovery of reaction products from gases treated with electric arcs, (P.), B., 840\*.

I. G. Farbenind. A.-G., and Engelhardt, A., degreasing of raw wool and other textile fibres, (P.), B., 678\*.

I. G. Farbenind. A.-G., and Fick, R., manufacture of hydrocyanic acid, (P.), B., 517\*.

I. G. Farbenind. A.-G., Finkelstein, H., and Häuber, H., prepar-

ation of 1-phenyl-3-methyl-5-pyrazolone, (P.), B., 917\*.

I. G. Farbenind. A.-G., and Fries, K., preparation of naphthacridinc-ms-carboxylic acids and derivatives, (P.), B., 11.

I. G. Farbenind. A.-G., Gaus, W., Griessbach, R., and Schliephake, O., manufacture of [high-grade] mixed fertiliser, (P.), B., 411\*.

I. G. Farbenind. A.-G., Griessbaeh, R., and Röhre, K., production of sodium nitrate, (P.), B., 940\*.

I. G. Farbenind. A.-G., Günther, F., and Nüsslein, J., soap preparation, (P.), B., 947\*.

I. G. Farbenind. A.-G., and Hahl, H., preparation of basic phenol ethers, (P.), B., 37.

I. G. Farbenind, A.-G., and Heimann, H., artificial fertiliser, (P.), B., 411.

I. G. Farbenind. A.-G., Heimann, H., and Bayerl, A., treatment of cellulose with lactic acid, (P.), B., 894\*.

I. G. Farbenind. A.-G., and Henglein, F. A., production of iodates, (P.), B., 94.

I. G. Farbenind. A.-G., and Hentrich, W., manufacture of N- $\omega$ aminoalkylamino-naphthalenecarboxylic [-naphthoic] acids, (P.), B., 200.

I. G. Farbenind. A.-G., Holzach, K., and Metzger, R., manufacture of insoluble azo-dyes for acetate silk, (P.), B., 12.

I. G. Farbenind. A.-G., and Imray, O. Y., manufacture of azo-dyes [ice-colours and pigments], (P.), B., 846.

I. G. Farbenind. A.-G., Jaeger, M., Moschel, W., and Suchy, R., production of metal chlorides free from water and oxides, (P.), B., 323\*.

I. G. Farbenind. A.-G., Jantsch, G., and Wolski, P., production of lithopone fast to light, (P.), B., 64\*.

I. G. Farbenind. A.-G., Kalischer, G., and Scheyer, H., carboxylic acid of the fatty-aromatic series, (P.), B., 917\*.

I. G. Farbenind. A.-G., Kränzlein, G., and Ebert, R., vat dyes of

the anthracene series, (P.), B., 891\*.

I. G. Farbenind. A.-G., Kränzlein, G., Voss, A., and Brunnträger, F., sulphonated cellulose derivatives and their manufacture, (P.), B., 14\*.

I. G. Farbenind. A.-G., Krzikalla, H., and Kämmerer, H., conversion of complex metal compounds of o-hydroxyazo-dyes into related compounds, (P.), B., 711.

I. G. Farbenind. A.-G., and Lange, Fritz, manufacture of depolymerisation products from carbohydrates of high mol. wt., (P.), B., 936\*.

I. G. Farbenind. A.-G., Laska, A. L., and Zitscher, A., manufacture of azo-dyes, (P.), B., 552\*

I. G. Farbenind. A.-G., Legeler, E., and Esselmann, P., continuous purification of crude carbon disulphide, (P.), B., 889\*.

I. G. Farbenind. A.-G., Leuchs, O., and Dörr, E., manufacture of cellulose ethers, (P.), B., 353.

I. G. Farbenind. A.-G., and Loehr, O., manufacture of polyalkylene glycol esters, (P.), B., 771.

G. Farbenind. A.-G., Lüttringhaus, A., Nawiasky, P., and Ehrhardt, A., manufacture of vat dyes, (P.), B., 12.

I. G. Farbenind. A.-G., Luther, M., and Heuck, C., production of condensation products of [hydroxymethyl] methylol com-

pounds of a urea, (P.), B., 404\*. I. G. Farbenind. A.-G., Luther, M., and Pieroh, K., recovery of hydrogenation products, (P.), B., 917\*.

I. G. Farbenind. A.-G., Marburg, E. C., and Rossteutscher, F., production of aluminium sulphate from crystalline aluminium chloride, (P.), B., 17.

I. G. Farbenind. A.-G., Marx, K., Brodersen, K., and Bittner, K., manufacture of agents for emulsifying, purifying, wetting, etc. by sulphonation, (P.), B., 466\*.

I. G. Farbenind. A.-G., Meyer, K. H., and Hopff, H., dyeing of

cellulose esters, (P.), B., 15.

I. G. Farbenind. A.-G., Meyer, K. H., Müller, Julius, and Hoffmann, U., softening of paper, (P.), B., 976\*.

I. G. Farbenind. A.-G., Michael, W., and Palm, A., utilisation of

sulphite-cellulose waste liquor, (P.), B., 893.

I. G. Farbenind. A.-G., Mittasch, A., and Wietzel, G., catalytically manufacturing phosphoric acid and hydrogen, (P.), B., 1015. I. G. Farbenind. A.-G., Müller, Carl, and Krägeloh, F., production

- of ammonia from its elements, (P.), B., 896.

  I. G. Farbenind. A.-G., Müller, W. J., Carstens, H., and Drucker, J., extraction and drying of jellies [gels], (P.), B., 128\*. I. G. Farbenind. A.-G., Müller-Cnnradi, M., and Leohner, G., [manufacture of] esters of silicic acid, (P.), B., 851\*.
- I. G. Farbenind. A.-G., Neelmeier, W., and Rebner, W., manufacture of mordant [chrome-printing disazo-] dyes, (P.), B., 710.
- I. G. Farbenind. A.-G., and Nicodemus, O., manufacture of indoles, (P.), B., 11.
- I. G. Farbenind. A.-G., and Nüsslein, J., dyeing of fibrous materials, (P.), B., 14.
- I. G. Farbenind. A.-G., Onnertz, P., Wesche, H., and Brodersen, K., non-deliquescent product from sulphite[-cellulose] waste liquor, (P.), B., 976\*.
- I. G. Farbenind. A.-G., Osswald, P., and Schad, K., separation of solid salts of ammonium and of the alkalis of alkaline earths, P.), B., 1015\*.
- I. G. Farbenind. A.-G., and Pistor, G., process of refining mag-
- nesium and its alloys, (P.), B., 726\*.

  I. G. Farbenind. A.-G., Pistor, G., and Borsbach, E., purifying gases containing phosphorus, (P.), B., 55\*.
- I. G. Farbenind. A.-G., Pistor, G., Lang, H., and Suchy, R., produc-
- tion of phosphorus pentoxido and phosphoric acid, (P.), B., 208\*. I. G. Farbenind. A.-G., and Pungs, W., manufacture of an artificial resin, (P.), B., 28.

bleaching of montan wax, (P.), B., 387\*.

I. G. Farbenind. A.-G., Pungs, W., and Galle, E., refining of hydrocarbons, (P.), B., 588.

- I. G. Farbenind. A.-G., Pungs, W., and Hellthaler, T., bleaching of montan wax, (P.), B., 425\*. I. G. Farbenind. A.-G., Schirmacher, K., Stolz, F., Schlichenmaier, H., and Krohs, W., production of a [nickel] catalyst, (P.),
- B., 135\*. I. G. Farbenind, A.-G., and Schliemann, M., apparatus for the production of silicon or titanium chloride or bromide, (P.),
- В., 244. I. G. Farbenind. A.-G., Schmidt, Hermann, and Hubert, E., spinning of artificial silk, (P.), B., 14\*.
- I. G. Farbenind. A.-G., Schmidt, O., Grosskinsky, O., and Niemann, G., splitting of hydrocarbons, (P.), B., 1007\*.
- I. G. Farbenind. A.-G., and Schnitzspahn, K., stabilised diazopreparations, (P.), B., 710.
- I. G. Farbenind. A.-G., and Schütte, H., tanning agent, (P.),
- I. G. Farbenind. A.-G., Sehulemann, W., Schönhöfer, F., and Wingler, A., manufacture of 8-amino-6-alkoxyquinolines, (P.), B., 661.
- I. G. Farbenind. A.-G., and Schwartz, E., [manufacture of] mixed fertiliser, (P.), B., 411\*.
- I. G. Farbenind. A.-G., Siedler, P., and Schulte, E., apparatus for refining raw carbon disulphide, (P.), B., 388\*, 1008\*.
- I. G. Farbenind. A.-G., and Spengler, O., solder for aluminium, (P.), B., 24\*.
- I. G. Farbenind. A.-G., Stolz, F., and Krohs, W., manufacture of aromatic acid esters of aa'-dimethyl-y-hydroxypiperidineβ-carboxylic acid, (P.), B., 340\*.
- I. G. Farbenind. A.-G., and Suida, H., production of gases rich in ethylene, (P.), B., 844\*
- I. G. Farbenind. A.-G., and Thoma, M. F., preparation of artificial staple fibre for spinning, (P.), B., 429. manufacture of yarn from [mixed] artificial and natural silk

fibres [suitable for cross-dyeing], (P.), B., 640. I. G. Farbenind. A.-G., and Weber, F., dyeing of cellulose esters,

(P.), B., 15.

dyeing of cellulose acetate, (P.), B., 15.

I. G. Farbenind. A.-G., Weiler, M., Wenk, B., and Stötter, H., condensation product from p-halogenated phenols and aldehydes, (P.), B., 636.

- I. G. Farbenind. A.-G., and Weise, P., manufacture of chromium compounds, (P.), B., 851\*
- . G. Farbenind. A.-G., Wietzel, G., and Wietzel, R., recovery of adsorbed gases from solid adsorbents, (P.), B., 4.
- I. G. Farbenind. A.-G., and Wietzel, R., manufacture of esters, (P.), B., 1008\*
- I. G. Farbenind. A.-G., Wietzel, R., and Kremp, F., production of formates [cyclohexyl formate], (P.), B., 427\*.
  I. G. Farbenind. A.-G., Wild, W., and Beck, C., manufacture of
- alkali nitrate, (P.), B., 394\*.
- I. G. Farbenind. A.-G., Woetzel, K., and Lint, H., production of azo-dyes on silk, (P.), B., 895\*.
- I. G. Farbenind. A.-G., and Wolffenstein, R., preparation of complex compounds of aromatic p-diamines with sulphur dioxide, (P.), B., 845\*.

Iantria, E. See Bâeulo, A. Ibarz, J. See Batnecas, T. Ibbs, T. L., and Hirst, A. A., thermal conductivity of gas mixtures, A., 500.

Ichikawa, S., natural etchings on Japanese pyrite crystals, A., 536. Idei, S., violation of the selection principle for the principal quantum number, A., 630.

Igarashi, E., unsaponifiable material. I. Distribution of unsaponifiable matter in the animal body, A., 952

unsaponifiable material. II. Unsaponifiable substance, cholesterol, and fatty acid in incubated eggs, A., 1328.

Ihara, S. See Asahina, Y.

Ihle, C. See Vorländer, D.

Ihlefeldt, J., and Polysius, G., crushing machine for hard materials, (P.), B., 927.

Ihlow, F., production of caffeine-free coffee, B., 795. Ihrig, H. K., and Associated Oil Co., refining of hydrocarbon oils, (P.), B., 885.

Ibrig, H. K., Campbell, S. E., and Associated Oil Co., manufacture of nitrogenous bases from hydrocarbon materials, (P.), B., 509. Iimori, S., approximate gallium content of green kaolin from

Tanokami; existence of gallium in the solar chromosphere, A., 420.

uranium/thorium ratio in monazites, A., 787.

Iimori, S., and Yoshimura, J., pink kaolin, and ruthenium as a minor constituent of the Tanokami kaolins, A., 420. rosy muscovite from Suizawa and a dark grey muscovite from

Doi, A., 673. Iitsuka, D., effect of mixing small quantities of cobalt with brass,

B., 602.

Ikebe, J. See Nagaoka, H.

Ikeda, S., rapid determination of the endurance limit [of steel] by measuring the electrical resistance, B., 476

Ikenmeyer, K., magnetic susceptibility of alkali and alkalineearth halides, A., 241.

Iki, S., relation between caking and moisture-absorbing power of some Japanese coals, B., 344.

Ilford, Ltd. See Shepherd, F. J. Iljin, E. A. See Smorodincev, J. A.

Iljinski, M. A., Maksorov, B. V., and Elagin, N. V., oxidation of anthracene by nitrogen oxides, B., 88. Iljinski, V. P., and Fillipeo, V. M., extraction of bromine from

natural bromine waters, B., 812.

Iljinski, V. P., and Sagaidachni, A. F., zinc from sulphide ores, B., 780, 1018.

Illig, K., physical and chemical properties of beryllium, A., 1024. clectro-osmotic purification of water and the preparation of "distilled" water by electro-osmosis, B., 873.

Illig, K., and Fischer, Hellmut, formation of beryllium alloys by direct electrolysis, B., 723.

Illig, K., and Hosenfeld, M., preparation of beryllium by thermal methods, A., 1024.

Illig, K., Hosenfeld, M., and Fischer, Hellmut, decomposition of beryl and the preparation of beryllium salts suitable for electrolysis, B., 722.

preparation of beryllium by electrolysis, B., 722.

Illingworth, S. R., and Illingworth Carbonization Co., Ltd., doors for furnaces, retorts, etc., (P.), B., 629.

Illingworth Carbonization Co., Ltd. See Illingworth,  $S.\ R.$  Illoch, A. Sec Continentale A.-G. I. Chemie.

Illuviev, V., and Galunova, K., effect of nitrates on the growth of flax, B., 616.

Iltschenko, I. F., iodometric method of determining copper in babbitt metal: comparison with gravimetric and colorimetric methods, B., 921.

Iltschenko, I. F., and Stachorski, R. M., rapid method of analysis of bearing-metal alloys, B., 753.

"Ilva" Alti Forni e Acciaierie, and Aureti, A., furnaces [for heating tubes, etc.], (P.), B., 361.

Imanishi, S., helium band spectrum. I., II., and III., A., 616, 859, 1116.

Imanishi, S. See also Dieke, G.H.Imas, (MRe.) R. See Thomas, P.Imbery, A., electric furnaces for heat treatment and forging, (P.), B., 177.

Imhäuser, K, carbamide synthesis in fatty livers, A., 1488. Imhäuser, K. See also Feulgen, R.

Imhoff, K., heatable sludge-digestion chamber for sewage treatment, (P.), B., 76.

sewage treatment with the aid of a screen aoting like a filter, (P.), B., 190.

sewage treatment by activated sludge combined with a preliminary tank treatment, (P.), B., 304.

removing oil from sewage or sludge, (P.), B., 380.

subdivided activated sludge system for sewage treatment, (P), B., 700.

Immer, F. R. See Hayes, H. K.

Imperial Chemical Industries, Ltd., treatment of black [gun-] powder, (P.), B., 912.

Imperial Chemical Industries, Ltd., and Allehin, L. J., new basic and acid dyes of the rhodamine type, (P.), B., 238.

Imperial Chemical Industries, Ltd., and Brightman, R., manufacture of azo-dyes [for wool and viscose silk] and their application, (P.), B., 711.

Imperial Chemical Industries, Ltd., and Chapman, E., cleavage of oils and fats, (P.), B., 63.

alkaline treatment [mercerisation] of natural and artificial cellulosic materials, (P.), B., 354. pickling of metals, (P.), B., 439.

Imperial Chemical Industries, Ltd., Chapman, E., and Hill, A., pickling of metals, (P.), B., 523.

Imperial Chemical Industries, Ltd., and Coffey, S., manufacture

of acyl derivatives of  $\beta$ -ketonic esters and  $\beta$ -diketones, (P.),

Imperial Chemical Industries, Ltd., and Crawshaw, B. P., degreesing metal and like articles [by means of solvents], (P.), B., 726. Imperial Chemical Industries, Ltd., and Davidson, A., production of green shades on materials made of or containing cellulose esters or ethers, (P.), B., 678.

Imperial Chemical Industries, Ltd., Davidson, A., Shepherdson, A., and Thomas, J., recovery and purification of anthraquinone,

(P.), B., 673.

Imperial Chemical Industries, Ltd., Davidson, A., Tatum, W. W., and Watts, G. E., manufacture of sulphonated aminoanthraquinones, (P.), B., 47.

manufacture of 1-aminoanthraquinone-2-sulphonic acid, (P.),

Imperial Chemical Industries, Ltd., Gibson, W., Hailwood, A.J.Payman, J. B., and Shepherdson, A., dye preparations, (P.),

Imperial Chemical Industries, Ltd., Gibson, W., and Payman, J. B.,

manufacture of esters, (P.), B., 349. Imperial Chemical Industries, Ltd., and Gordon, K., hydrogenation of coal, tars, mineral oils, and other carbonaceous materials,

(P.), B., 465.

Imperial Chemical Industries, Ltd., Gordon, K., and Hughes, J., treatment of coal-distillation gases, (P.), B., 233.

Imperial Chemical Industries, Ltd., Hailwood, A. J., Naunton, W. J. S., and Shepherdson, A., method of introducing chemicals into rubber, etc., (P.), B., 220.

colouring of rubber, (P.), B., 257.

manufacture of ingredients for the compounding of rubber, (P.), B., 367.

Imperial Chemical Industries, Ltd., Hailwood, A.J., Tatum, W.W., and Watts, G. E., manufacture of anthraquinono derivatives and their application in dyeing, (P.), B., 890.

Imperial Chemical Industries, Ltd., Hill, R., and Walker, E. E.,

manufacture of artificial resins, (P.), B., 333. Imperial Chemical Industries, Ltd., Holt, F., and Mitchell, J. A. M. W., [granular] compositions containing alkali per-

oxides [for use in respirators, etc.], (P.), B., 850.
Imperial Chemical Industries, Ltd., and Horsley, G. F., production of esters, (P.), B., 122.

Imperial Chemical Industries, Ltd., and Mendoza, M., new pyrazolones and dyes therefrom, (P.), B., 316.

Imperial Chemical Industries, Ltd., and Naunton, W. J. S., manufacture of vulcanised products from [fatty] oils, (P.), B., 650. Imperial Chemical Industries, Ltd., Naunton, W. J. S., and Payman, J. B., new compounds and their application as vulcanisation accelerators for rubber, (P.), B., 221.

Imperial Chemical Industries, Ltd., and Paterson, J. H., electrodes

for use in arc welding, (P.), B., 101.

Imperial Chemical Industries, Ltd., Rodd, E. H., and Sharp, F. L., triarylmethane dyes, (P.), B., 467.
Imperial Chemical Industries, Ltd., Rodd, E. H., and Stocks, H. H.,

manufacture of 3:7-tetra-alkyldiaminoxanthones, (P.), B., 709.

manufacture of xanthen dyes, (P.), B., 711. Imperial Chemical Industries, Ltd., Rowell, S. W., and Hirst, H. S., oxidation of volatile organic compounds [acctaldehyde to acetic acid], (P.), B., 275.

Imperial Chemical Industries, and Savage, J., degreasing of fibrous materials, (P.), B., 676.

Imperial Chemical Industries, Ltd., Shepherdson, A., and Tatum, W. W., dyes of the anthraquinone series and their application, (P.), B., 808.

Imperial Chemical Industries, Ltd., and Speight, E. A., dyeing of cellulose esters and ethers, (P.), B., 716.

Imperial Chemical Industries, Ltd., Strafford, N., and Walker, E. E., manufacture of resins for lacquers, varnishes, etc., (P.), B., 444.

Imperial Chemical Industries, Ltd., Strafford, N., Walker, E. E., and Jenkins, W. J., application of lacquers containing cellulose

esters, (P.), B., 610.

Imperial Chemical Industries, Ltd. See also Ashcroft, G. A., Collier, Imperial Chemical Industries, Ltd. See also Asheroft, G. A., Collier, A. J., Davis, W. G., Dean, H. P., Dickson, W., D'Leny, W., Ewan, T., Foster, B. W., Freeman, S. B., Golding, H. D., Gordon, K., Harris, G. J., Harrison, C. F. R., Henderson, B. W., Hirst, H. S., Horsley, G. F., Hull, P. H., Humphrey, H. A., Jenkins, W. J., Mitchell, A. E., Moore, J. W., Payman, J. B., Riley, R., Roberts, J. H., Rule, A., Scharff, G. E., Slade, R. E., Smith, C. C., Smith, H. G., Ward, W. J. V., Watts, H. G., Weil, J. A., Winter, R. M., and Worboys, W. J.

Imperial Institute, oil seeds from British Guiana [crabwood seed oil: awarra palm oil] B. 178

oil; awarra palm oil], B., 178.

new oil-seed from Brazil [arara nuts], B., 179. new materials for the manufacture of artificial silk, B., 389. fruits and seeds of Aleurites Fordii from Kenya Colony, B., 402. fruits and seeds of Hydnocarpus Woodii from North Borneo, B., 402.

oil seeds, B., 986. Imperial Oil, Ltd., treatment of hydrocarbon oil, (P.), B., 348. Imray, O. Y. See I. G. Farbenind. A.-G.

Imre, L. See Hahn, O.

Imrie, C. G., action of extract of pituitary on the blood-sugar after pancreatectomy, A., 959.

Inaba, J. See Miyagawa, I.

Inawashiro, R., and Hayasaka, E., effect of muscular exercise in beri-beri. I. Gas and carbohydrate metabolism. II. Circulatory apparatus, A., 1192.

Indiana Steel & Wire Co. See Crapo,  $F.\ M.$  Industrial Associates, Inc. See Jones,  $A.\ B.$ 

Industrial Research Corporation. See Davies, H. R.

Industrial Spray-Drying Corporation, and Lamont, D. R., soan product and its manufacture [by spraying and drying], (P.), B., 27.

Industrial Spray-Drying Corporation, and Uhl, B. F., treating sprayed materials with gases, (P.), B., 80.

Industrial Spray Drying Corporation. See also Ostermann, W. Industrial Waste Products Corporation. See Dickerson, W. H., and Marlatt, C. D.

"Infra," Sorrel, V., and Lafont, L. A., electric resistance furnace for the thermal treatment of metals, etc., (P.), B., 985.

Inganni, A. See Ferrari, A.

Ingalls, E. See Redfield, A. C.
Ingberg, S. H., and Foster, H. D., fire-resistance of hollow load-bearing wall tile, B., 357. Ingersoll, A. W., [preparation of] hydrocinnamic acid, A., 1068. Ingersoll, L. R., and Hanawalt, J. D., gas content, crystal struc-

ture, and hydrogen absorption of sputtered nickel films, A., 1368.

Ingham, J. W., apparent hydration of ions. III. Densities and viscosities of saturated solutions of ammonium chloride in hydrochlorio acid, A., 1233. Inglis, F. G., apparatus for cooling and purifying gases, (P.),

B., 120\*.

Ingold, C. K., aromatic substitution from the viewpoint of electronic theory of valency, A., 1289.

Ingold, C. K., and Rothstein, E., influence of poles and polar linkings on tautomerism in the simple three-carbon system. Prototropy and anionotropy in trialky/propenylammonium derivatives, A., 300.

Ingold, C. K., and Shoppee, C. W., mobility of symmetrical triad (prototropic) systems. IV. Mobility in simple three-carbon system terminated by aryl groups, A., 556.

mobility of symmetrical triad (prototropic) systems. V. New

triad system (methyleneazomethine), A., 927.

Ingold, C. K., and Vass, C. C. N., influence of poles and polar linkings on course pursued by elimination reactions. II. Mechanism of exhaustive methylation, A., 175.

Ingold, C. K. See also Baker, J. W., Burton, H., Fenton, G. W.,

and Gane, R. Ingraham, W. T., smokcless powder and its treatment, (P.), B., 540.

quick-burning delay powder, (P.), B., 624. flash-reducing agent for smokeless powders, (P.), B., 998.

Ingram, S. B., second spark spectrum of sulphur, S III, A., 965. classification of the are spectra of nitrogen and carbon, A., 1116.

Ingvaldsen, T. See McRae, D. F. Inman, M. T., jun., sulphonated oxidation products of petroleum as insecticide activators, B., 586.

Innes, R. F., proposed official method for analysis of one-bath chrome[-tanning] liquors, B., 614.

sulphuric acid in vegetable-tanned leather, B., 729.

Inoue, T. See Pfeisfer, P. Inoue, Y., acylation of cystine, A., 1284.

Inouye, J. M. See Flinn, F. B. Inouye, K., influence of  $p_{\Pi}$  on glycerophosphatase, A., 847. effect of electrolytes on glycerophosphatase, A., 1490.

Insley, H., the petrographic microscope as an instrument for the glass technologist, B., 129.

determination of the source and means of prevention of stones in glass, B., 355, 719\*.

Insley, H. See also Pendergast, W. L. Institution of Gas Engineers and University of Leeds, Joint Research Committee, carbonisation. IV. Influence of various factors on ignition temperature, reactivities, and structure of coke. V. Temperature, size of coal, blending with inorganic compounds, B., 629.

products of combustion from typical gas appliances. IV., B., 743.

Institution of Gas Engineers, Liquor Effluents Research Committee, disposal of liquor effluents from gas works, B., 630.

Insulex Corporation, composition materials [cellular cement], (P.), B., 130.

Intercontinental Rubber Co. Sco Yeandle, W. H.

Interessen Gemeinschaft der Farbenindustrie Akt.-Ges. See I. G. Farbenind. A.-G.

International Cement Corporation. See Durbin, H. R. International Coal Carbonisation Co. See McEwen, S.

International Combustion, Ltd., and McEwen, S., carbonising or distilling material, (P.), B., 802, 932.

International Combustion, Ltd., and McGuire, P. W., removal of dust from gases, (P.), B., 1001.

International Combustion, Ltd., and Rosencrants, F. H., pulverised fuel burners, (P.), B., 161.
pulverising systems, (P.), B., 306.
International Combustion Engineering Corporation, and Runge,

W., distillation, (P.), B., 116.

distillation of tar, oil, and other materials, (P.), B., 160. International Combustion Engineering Corporation. See also Wood, W. R.

International Fireproof Products Corporation, and Vivas, F. S., chlorination of hydrocarbons, (P.), B., 349.

[non-explosive and fireproof] cellulose lacquers, (P.), B., 610. International Fireproof Products Corporation. See also Vivas, F. S. International General Electric Co., Inc., and Allgemeine Elektricitäts-Ges., chamber furnaces [with rotatable platforms], (P.), B., 420.

enamelling furnaces, etc., (P.), B., 691.

electric discharge tubes, (P.), B., 782. annealing furnaces [for wire], (P.), B., 944.

International Nickel Co., welding cast iron, (P.), B., 59. manufacture of alloy steel, (P.), B., 856.

International Nickel Co., and Bothwell, E. J., [nickel] alloys, (P.), B., 562.

International Nickel Co., and Coyle, F. B., manufacture of cast iron, (P.), B., 686.

International Nickel Co., Harshaw, W. J., Savage, P. M., and Bezzenberger, F. K., manufacture of nickel anodes, (P.), B., 688. International Nickel Co., Merica, P. D., and Kayes, A. E., manufacture of nickel and nickel alloys, (P.), B., 330.

International Nickel Co., Merica, P. D., Vanick, J. S., and Wickenden, T. H., chill-cast iron alloys; grey-iron alloys, (P.), B., 287.

manufacture of cast iron, (P.), B., 561.

International Nickel Co., and Pilling, N. B., [nickel] alloys, (P.),

International Nickel Co., Pilling, N. B., and Schoener, J. G., welding [electrodes for nickel], (P.), B., 135.

International Nickel Co. See also McKnight, C., jun.

International Patents Development Co., manufacture of dextrose, (P.), B., 833.

treatment of starch, (P.), B., 1027.

International Patents Development Co. See also Berlin,  $H_{\bullet}$ , and Newkirk, W. B.

International Precipitation Co. See Schmidt, W. A.

International Printing Ink Corporation. See Brasington, C. P.

International Yeast Co., Ltd. See Olsen, A. J. C.

Internationale Bergin-Compagnie voor Olie- en Kolen-Chemie.

See Debo, A., and Hofsäss, M.

Internationale Holding de Distillation & Cokefaction & Basse
Temperature & Minière "Holcobami" Soc. Anon. See Compagnie Générale de Distillation & Cokefaction à Basse Temperature & Minière "Holcobami" Soc. Anon.

Internationale Nahrungs- & Genussmittel Akt.-Ges. See Stau-

dinger, H.

Intonti, R. See Giordani, F. Introzzi, P., Ehrmann's alcohol test for examining the gastric functions, A., 717. Ioanid, N. Seo Maxim, N.

Ionesco, D., and Bernard, A. T., active substances of the heart; heart hormone, A., 1110.

Ionesco-Matiu, A., determination of reducing sugars by the ferricyanide method, A., 797\*.

Ionesco-Matiu, A., and Carale, (Mlle.) A., determination of cyanides and basic cyanides of mercury, A., 419.

Ionesco-Matiu, A., and Popesco, A., determination of mercury in

certain pharmaceutical products, B., 698.
Ionesco-Matiu, A., and Vitner, M., determination of phosphorus

in blood, A., 1095.
Ionescu, M. V., and Bodea, C., identification of hexamethylenetotramine in wines, B., 697.

Ionescu, M. V., and Georgescu, A., conjugated systems; factors disturbing valency fields. V. Action of compounds with a reactive methylene group on carbindogenides, A., 1073.

Ionizing Corporation of America. See Henry, I. W. Ipatiev, V., jun. See Ipatiev, V. N. Ipatiev, V. N., and Doglov, B., hydrogenation and decomposition of organic compounds of silicon at high temperatures and pressures, A., 800.

Inatiev, V. N., and Inatiev, V., jun., displacement of copper from neutral and acidic copper sulphate solutions by hydrogen under

pressure, A., 410.

Inatiev, V. N., and Orlov, N. A., pyrogenic decomposition of aromatic compounds under pressure of hydrogen in presence of a mixed catalyst. II., A., 548.

Ipatiev, V. N., Orlov, N. A., and Bielopolski, M., cracking mazout

containing paraffin wax under high hydrogen pressures, B., 1004. Inatiev, V. N., and Petrov, A. D., pyrogenic decomposition of wood tar in presence of hydrogen and under pressure, B., 271

Ipatiev, V. N., Razubaiev, G., and Stromski, W., action of

ammonia on halogenated arsines, A., 584, 1090\*.

Ipatiev, V. N., and Zviaginstsev, O. E., displacement of metals and their oxides by hydrogen under pressure at high temperatures; action of hydrogen at high temperatures and pressures on solutions of ruthenium salts, A., 527, 1029.

Ipsen, C. L. See General Electric Co.
Irby, W. See General Electric Co.
Iredale, T., photo-decomposition of ethyl iodide, A., 408. calculation of surface tension from drop weight, A., 1378.

Iredell, C. V., loss calculations in dissolving, leaching, and extraction, B., 1.

Iredell, C. V. See also Westinghouse Lamp Co. Ireton, H. J. C. See McLennan, J. C.

Irie, T. See Yoshioka, T.

Irion. W. See Abderhalden, E. and Küster, W.

Iron and Steel Institute, first report on blast-furnace plant and

practice, B., 435.

Irvine, (Sir) J. C., starch, A., 1168.

Irvine, (Sir) J. C., Oldham, J. W. H., and Skinner, A. F., condensation of dextrose and lavulose; isosucrose, A., 683. Irvine, (Sir) J. C., Pringsheim, H., and Skinner, A. F., methyl-

ation of a-tetra-amylose, A., 1281.

Irvine, (Sir) J. C., and Stevenson, J. W., molecular structure of inulin; new anhydrofructose, A., 1046.

Irving, D. R., and Dietrich, W. F., plasticity and related properties of clays, B., 208.

Irving,  $\tilde{F}$ ., styrylpyrylium salts. XII. spiroPyrans from 9-methyland 9-ethyl-xanthylium salts, A., 822.

Irving, F. See also Heilbron, I. M.

Irving, H. See Chattaway, F. D., and Forbes, J. C.

Irving, J. T., lactic acid and glycogen content of kidney cortex, A., 94.

Irving, L. See Bastedo, G. M., and Ferguson, J. K. W.

Irwin, M., spectrophotometric studies of penetration. Resemblances between the living cell and an artificial system in absorbing methylene-blue and trimethylthionine, A., 361.

Isaachsen, I., and Aktieselskapet Krystal, crystallisation of solid substances [rock-salt] in a coarse granular form from solutions,

(P.), B., 55\*.

Isaacs, G. F., and Partington, J. R., concentration cells in ethyl alcohol: sodium and potassium iodides, A., 269.

Isaacs, M. L. See Coulter, C. B.

Isaacs, R. See Upjohn, L. B.
Isbell, H. S. See Bloomfield, J. J., and Hudson, C. S.

Isenberg, H. O. C., and General Chemical Co., apparatus for chemically transforming gases, (P.), B., 802.

Isenbruch, J. See Glimm, E. Isenbour, L. L. See Whitmore, F. C.

Isermann, S., and Vernet, W., f.-p. depressant, (P.), B., 501.

Isgarischev, N., and Ravikovitsch, H., activation of chemical reactions by neutral salts. V. Action of neutral salts on cathodic polarisation, A., 518.

Isgarischev, N., and Schapiro, S., activation of chemical reactions by neutral salts. III. Activation of dissolution of nickel [in

sulphuric acid], A., 518.

Isgarischev, N., and Turkovskaja, A., activation of chemical reactions by neutral salts. IV. Action of neutral salts on the potential of oxidation-reduction reactions, A., 518.

Isham, R. M., and Doherty Research Co., ethyl alcohol substitute and its manufacture, (P.), B., 234.

Isherwood, N., mechanism for use in treatment ["filling"] of fabrics, (P.), B., 204.

Ishibashi, E. See Asahina, Y.

Ishibashi, K., nitrogen compounds in coal, B., 582. Ishibashi, M., quantitative analysis of phosphoric acid. I. Determination as magnesium pyrophosphate. II. Gravimetric and volumetric methods. III. Determination as zinc ammonium phosphate, A., 529.

quantitative analysis of phosphoric acid. IV. Gravimetric and volumetric determination as ammonium phosphomolybdate,

Ishida, Y., and Fukushima, M., Stark effect of lithium, A., 2. Ishida, Y., and Hiyama, S., production of high Lo Surdo fields, A., 1035.

Ishida, Y., and Kamijima, G., Stark effect of helium, A., 2.

Ishidate, M., constituents of campherol, A., 72.

Ishiguro, K. See Minatoya, S.

Ishijuro, Y. See Nishi, T.

Ishikawa, F., and Murooka, H., ammonium sulphite and hydrogen sulphite. I. Solubility and transition point of ammonium sulphite, A., 141.

ammonium sulphite and hydrogen sulphite. II. System ammonium sulphite-ammonium sulphate-water, A., 400.

Ishikawa, F., and Shibata, E., thermodynamic study of lead monoxide, A., 885.

Ishikawa, M., influence of carbohydrates on the bacterial decomposition of urea, A., 220.

gas production by bacterial symbiosis with special reference to the influence of nitrogenous substances, A., 355.

Ishikawa, N. See Kafuku, K. Ishikawa, S., tautomerism of 2:5-dithionpiperazine, A., 1183. Ishikawa, T., viscosity formula for binary mixtures. I., II., and III., A., 387, 500, 994. Ishimaru, S. See Baxter, G. P.

Ishiyama, N., physico-chemical changes in the blood and histological changes in the kidneys in experimental nephritis,

Isles, F. W., unbreakable explosion pipette, A., 44.

Isley, G. H., and Morgan Construction Co., regenerative furnace used in steel making, (P.), B., 855.

Ismailov, N. A. See Kosakevitsch, P. P.

Isobe, H., adsorbing power and vapour pressure of adsorbed water by acidic, neutral, and alkaline earths, A., 133.

Isobe, H., Endo, Y., and Kunise, I., adsorption of gasoline and of benzene vapour by acidic clay, B., 1004.

Isobe, H., and Mori, S., adsorption velocity of water and benzene vapours, A., 1376.

Isolantite Co. of America, Inc. See Crowley, H. L.

Isom, E. W., and Sinclair Refining Co., cracking of hydrocarbon oils, (P.), B., 669, 803, 883.

cracking of hydrocarbons, (P.), B., 882. Israëls, M. C. G., and Lamb, F. W., carbon dioxide content of venous blood. I. Effect of oxygenation and critical oxygen tension, A., 460.

carbon dioxide content of venous blood. II. Carbon dioxide equilibria between mixed venous blood and re-breathed airs, A., 950.

Issekutz, B. von, and Vegh, F. von, diuretic action of organic mercury compounds, A., 98.

Isselstein, (Frl.) M. T., adsorption, A., 502. Issendorf, J. von, evaporation at the cathode of the mercury arc, A., 227.

Itabashi, I., weight burette, A., 904. Itallie, E. I. van, determination of iodine in organic substances which lose iodine with ease, A., 1093.

evaluation of belladonna leaves, B., 835.

thiocyanogen value of strophanthus oil, and of oils of the chaulmoogra group, B., 861.

Itallie, L. van, detection of bile pigment in urine, A., 343. Itallie, L. van [with Harmsma, (Frl.) A.], ergot and ergot extract, B., 416.

Itallie, L. van, and Steenhauer, A. J., succinic acid as a product of decomposition of organs, A., 341. Itallie, L. van, Steenhauer, A. J., and Harmsma, (Frl.) A., evalu-

ation of sweet spirit of nitre, B., 226. Itallie, T. B. van. See Karrer, P.

Itano, A., portable apparatus for  $p_{\rm H}$  determination, A., 1034. Itano, A., and Arakawa, S., microbiological investigation on the virgin and arable volcanic soils from Sakura-jima, Japan, B., 786.

soils in rice fields. II. General microbiological investigation. III. Microbiological analyses in rice fields and dry farm soils, B., 786.

Itelsohn-Schechter, R. See Rona, P.

Iterson, F. K. T. van, and Kuypers, P. M., cooling and degassing towers, B., 1035.

Ito, K., equilibrium of halogen ions. I. Combination of eggalbumin with halogen ions, A., 395.

Ito, R. See Kubota, S.

Ito, S., simple method of obtaining a single crystal of zinc with approximately any desired orientation of its principal axis, A., 748.

Ito, T., and Pauli, W., electrolyte-free proteins. VIII. Free

charge and neutral salt effects of pure proteins, A., 1474.

Ivančeva, (Miss) E. G. See Pamfilov, A. V.

Ivanenko, D., velocity in quantum mechanics, A., 863. Ivanenko, D. See also Fock, V.

Ivanov, A. K. See Karavaev, N. M.

Ivanov, D., thermal decomposition of organo-magnesium alkoxides, A., 801.

true mixed organo-magnesium carbonates, A., 1049. Ivanov, N. N., Alexandrova, R. S., and Kudrjavzeva, A., transformation of sugars in the ripening of the fruits of the water melon, A., 1345.

Ivanov, N. N., and Grigorojeva, V. F., constancy of the essential oil of seedlings of aniseed fruit, A., 361.

Ivanov, N. N., and Krupkina, F. A., separation of nitrogen during yeast fermentations, A., 1339.

Ivanov, N. N., and Kudrjavzeva, A., separation of invertase from cells, A., 1342.

Ivanov, N. N., and Lischkevitsch, M. J., loss of nitrogen on drying plants, A., 612.

Ivanov, N. N., and Smirnova, M. I., importance of oxygen in the formation of carbamide by fungi, A., 108.

Ivanov, S., vegetable oils of the Union of S.S.R. I. Oil from

alytscha kernels (Prunus divaricata, Zed.), B., 923. Ivanov, S., and Kurotschkina, N. V., vegetable oils of the Union of S.S.R. II. Nature of fatty oils of Labiate, in connexion with the climate of district of origin, B., 923.

Ivanov, S., and Magnitova, A.J., vegetable oils of the Union of S.S.R. III. Nature of fatty oils of Anacardiaceae, in connexion with the climate of district of origin, B., 987. Ivanovsky, N., "salt hydrolysis" of starch, A., 799.

Ives, F. E., and Fenninger, C. W., colour photograph or film and its production, (P.), B., 577.

Ives, H. E., and Olpin, A. R., maximum excursion of the photo-

electric long-wave limit of the alkali metals, A., 968.

Ivy, A. C. Seo Crandall, L. A. Iwaizumi, S. See Osawa, A.

Iwasaki, C., Fushun coal and its geological significance, A., 169. Iwasaki, C., and Sasaki, K., dry distillation of some Japanese coals,

Iwasaki, K., mechanism of the fermentation of dihydroxyacetone, A., 354.

Iwasaki, S. See Kita, G.

Iwasaki, T. See Hagiwara, K.

Iwase, E., coagulation of von Weimarn's Auf sols. I., A., 879. Iwata, M., sweetening components of astringent "kaki" (varieties of Dispyros kaki, L.), A., 856.

Iwatake, M., microscopical study of electric double refraction in liquids, A., 981.

Iyengar, M. S. See Rao, M. G. S. Izard, E. F., reduction potential of selenious acid, free energy of aqueous selenic acid, and free energy of trichloride ion, A., 1146. Izsak, A., and Eastern Alcohol Corporation, manufacture of butyl

and isopropyl alcohols [by fermentation], (P.), B., 867. Izume, S., Yoshimaru, Y., and Komatsubara, I., experimental rickets. II. Influence of ultra-violet irradiation on the antirachitic value of soya-bean oil, A., 1111.

Jaag, E. See Bosshard, E. Jaanus, R. See Dorfman, J.

Jablczyński, K., equilibrium law for electrolytes; association, A., 508

Jabłczyński, K., and Frenkenberg, S., autocatalytic decomposition of thiosulphuric acid. II., A., 772, 1019\*.

Jabłczyński, K., Hermanowicz, E., and Wajchselfisz, H., kinetics of the dissolution of aluminium and cadmium in hydrochloric acid, A., 657.

Jablezyński, K., and Jaszezołtówna, H., kinetics of coagulation of colloids of the second order, A., 506, 761\*

Jabłczyński, K., and Seidengart, C., equilibrium law for electrolytes and ionic hydration, A., 1009. Jabłezyński, K., and Szames, (Mlle.) G., influence of stirring on the

rate of coagulation of colloids, A., 761, 1007\*. Jabłczyński, K., and Wajchselfisz, H., kinetics of dissolution of

cadmium in hydrochloric acid, A., 1019.

Jabloński, A., absorption bands in the spectrum of cadmium vapour, A., 1.

Jabloński, A. See also Kapuściński, W. Jaccard, G. See Fierz-David, H. E.

Jacek, IV., velocity of dissolution of comminuted solids, I., A., 391. connexion between velocity of dissolution and solubility; general equation for solubility. I., A., 1375.

Jack, J. A., refractory materials, (P.), B., 645. Jackman, D. N. See Brit. Launderers' Res. Assoc.

Jackman & Co., Ltd., J. W., and Neville, F. W., cupola furnaces, (P.), B., 58.

Jackson, A. M. See Beattie, J. H.

Jackson, D. A., hyperfine structure in the arc spectrum of easium and nuclear rotation, A., 1.

magnetic moment of the lithium atom, A., 628.

fine structure of the high series doublets of cæsium, A., 860.

Jackson, E. R. See Bradshaw, G. W. Jackson, F. H. See Bailey, F.

Jackson, H., jun., and Krautz, C. I., vitamin-B in cancer, A., 1100.

Jackson, H. A. See Hall, R. E. Jackson, J. A., measurement and value of the plasticity of coal, B., 581.

Jackson, J. F. See Gen. Electric Co., Ltd.

Jackson, J. G. See Babasinian, V. S.

Jackson, (Miss) J. H. See McClelland, E. W.

Jackson, K. S., Russell, A. S., and Merrill, J. L., electrolytic deposition of tungsten at a mercury cathode, A., 1402.

Jackson, L. C., magnetic properties in relation to chemical constitution, A., 248.

Jackson,  $Lucien\ C$ . See Williams,  $J.\ F$ .

Jackson, L. E., Wassell, H. E., and Mundatechnical Products Co., moth-proofing substance, (P.), B., 353.

Jackson, R. F., and Goergen, S. M., crystalline difructose anhydride from hydrolysed inulin, A., 1280.

Jackson, R. W., effect of indole derivatives in a diet deficient in tryptophan, A., 1485.

Jackson, R. W., Sommer, B. E., and Rose, W. C., nutritive properties of gelatin, A., 95.

Jackson & Bro., Ltd. See Gass, G. P.

Jacob, A., determination of the nutrition requirement of the vine by chemical examination of the leaves, B., 410. influence of potash manuring on the hectolitre-weight of cereals.

B., 532.

Jacob, A. See also Eckstein, O. Jacob, K. D., and Reynolds, D. S., reduction of tricalcium phosphate by carbon, B., 16.

Jacob, K. D. See also Ross, W. H.

Jacobi, B. See Bergmann, M. Jacobi, J., and Baumann, F., day- and night-fluctuations of the blood-sugar in non-diabetics, diabetics, and hypertonics, A., 1482.

Jacobi, K. R. See Slotta, K. H. Jacobi, M. See Weber, W. Jacobi, W., charges of mercury atoms in the canal-ray stream, A., 1212.

Jacobs, A. N. P., colouring and stamping small articles of magnesia cement, (P.), B., 720.

Jacobs, K. W. J. H., low-temperature distillation of carbonisable material, (P.), B., 771\*.

Jacobs, M. B. See Weinberger, W.

Jacobs, W. A., and Gustus, E. L., Digitalis glucosides. III. Gitoxigenin and isogitoxigenin, A., 798. strophanthin. XVII. Dehydration and lactone cleavage in

isostrophanthic acid derivatives, A., 1456.

Jacobs, W. A., and Heidelberger, M., sarmentocymarin and sarmentogenin, A., 729.

Jacobsen, K. A., manufacture of yeast, (P.), B., 262. Jacobsohn, I. M., and Truscott, S., aircraft covering; gas-retaining fabric, (P.), B., 554.

Jacobsohn, K., hypersensitising for extreme speed of exposure, B., 623.

theory of hypersensitisation, B., 797.

Jacobsohn, K. See also Zocher, H. Jacobsohn, K. P. See Neuberg, C. Jacobson, C. A., and Pray, H. A. H., fluosilicates of organic bases, A., 57.

Jacobson, D.L., and Koppers Co., production of oxides of nitrogen from ammoniacal liquor, (P.), B., 588.

gas purification process, (P.), B., 707\*.

Jacobson, D. L. See also Hill, W. H., and Koppers Co.

Jacobson, H. See Sabalitschka, T.

Jacoby, F. C., special case of syneresis, A., 881

Jacoby, M., parenteral absorption of colloids. I., A., 345.

Jacoby, R. See Gen. Electric Co.

Jacocks, G. T., and Whitlock Coil Pipe Co., heat-exchange apparatus, (P.), B., 77.

Jacqué, L., fusibility of mixtures of ferric oxide and lime, B., 358.

Jacqué, L. See also Brunschwig, R., Charpy, G., and Jacqué, M. Jacqué, M., and Jacqué, L., activated carbon, B., 914. Jacquet, P. See Marie, C.

Jacyno. See Jazyna.

Jäckh, R. See Le Blanc, M. Jäger, A. See Kohorn, O. von.

Jaeger, A. O., catalytic processes for utilisation of coal-tar crudes,

contact sulphuric acid process, B., 717.

Jaeger, A. O., Canon, F. A., and Selden Co., purification of phthalic anhydride, (P.), B., 936\*.
 Jaeger, A. O., and Selden Co., purification of benzoic acid and its

derivatives, (P.), B., 200, 511, 550.

catalytic oxidation of anthracene, (P.), B., 200.

catalytic apparatus, (P.), B., 229.

catalytic oxidation of naphthalene, (P.), B., 427.

catalytic oxidation of organic compounds, (P.), B., 467\*, 550, 772.

Jaeger, A., O., and Selden Co., purification of crude aromatic hydrocarbons (P.), B., 889\* base-exchange body, (P.), B., 897\* Jaeger, A. O., Selden Co., and Bertsch, J. A., catalytic oxidation of sulphur dioxide, (P.), B., 283.

Jaeger, A. O., and Selden Research Engineering Corporation, purification of crude anthracene, (P.), B., 350. base-exchange body, (P.), B., 556.

Jaeger, A. O. See also Bertsch, J. A., and Selden, W. Jaeger, C., preparation of a therapeutic product, (P.), B., 377.
 Jaeger, F. M., structure of artificial ultramarines. IV. Ultramarines of thallium, and the analogous derivatives of the bivalent metals calcium, strontium, barium, zinc, manganese, and lead, A., 494.

constitution and structure of ultramarine, A., 749.

Jaeger, F. M., and Melle, F. A. van, structure of artificial ultramarines. V. Absorption phenomena with ultramarine, and the structure of nosean, hauvne, and the ultramarines, A., 494.

Jaeger, F. M., Terpstra, P., and Westenbrink, H. G. K., crystal structure of gallium, A., 748.

Jäger, G., velocity law of gas molecules, A., 1383.

Jaeger, J. C. See McGee, J. D. Jaeger, M. See I. G. Farbenind. A.-G.

Jaenckner, W. See Fisher, Joseph.
Jänecke, E., two correlated space models for representing the equilibria in the system iron-carbon-oxygen, A., 399.

mixed crystals, solutions, and fusions of the system (K,NH<sub>4</sub>)(Cl,NO<sub>3</sub>), A., 500.

solubility of ammonium hydrogen carbonato in water, A., 874.

system water-carbon dioxide-ammonia, A., 1388.

Jäppelt, A. See Seidenschnur, F.

Jaffé, G., theory of columnar ionisation. II., A., 621.

Jagt, B. G. H. van der, preparation of coconut fibres for spinning and weaving, (P.), B., 750.

Jagt, B. G. H. van der, Bergh, Z. van der, and Kuyk, F. A. J. van, industrial treatment of coconuts and their constituents, particularly coconut fibres, (P.), B., 554\*.

Jahn, A. R., [pressure] filtering apparatus, (P.), B., 1001.
Jahn, C. See Schoeller, W. R.

Jakemann, C., lanoline rust preventers, B., 442.

Jakeš, M., dehydrogenation of ar-1:3-dibromo-β-totralol with bromine, A., 692.

Jakimov, P., production of tannin extracts from crude tanning materials, B., 615.

pine bark and the manufacture of rich pine-bark extracts, B., 1024.

Jakimov, P., and Weltistova, N., Siberian larch bark as raw material for the manufacture of tannin [extract], B., 105.

Jakimov, P. See also Smetkin, A. Jakob, G., physics of the "Läuterbottich," B., 1048.

Jakob, J., schefferite and richterite, A., 45.

micas containing rubidium and cæsium, A., 45.

constitution of mica. V. Pegmatitic muscovite. VI. Nonpegmatio musoovite, A., 1263.

Jakob, J., and Hesemann, J., karpholite, A., 45. Jakob, W. F., and Łuczak, E., hydrates of calcium oxalate, A., 424.

Jakobsen, J., oil presses, (P.), B., 364.

Jakosky, J. J., petroleum-cracking process and apparatus, (P.),

Jakova-Merturi, G., production of plastic masses from casein, (P.), B., 28.

Jakova-Merturi, G. See also Carbonisation Soc. Gén. d'Exploit. des Carbones.

Jakovkin. See Yakovkin.

Jakovlev, A., synthesis and properties of colloidal aluminium and magnesium hydroxides, A., 392.

Jakovlev, A., and Terenin, A., optical excitation of phosphorus vapour, A., 1117.

Jakovlev, A. See also Dumanski, A. V.

Jakovleva, A. See Wichert, M.

Jakubson, S. I. See Plotnikov, V. A.

Jalade, [novel form of extractor and its application in the] determination of theobromine and assay of kola preparations, B., 909.

Jaloustre. See Aversenq. Jalowzer, B. See Stiasny, E. G.

James, A. E. W. See Heenan & Froude, Ltd.

James, A.J. See Dwyer, T.A.W.

James, C. See Bowles, J. A. C.
James, C., and Fogg, H. C., rapid concentration of germanium and gallium contained in zine oxide carrying them, A., 778.

James, J. H., treatment of partial oxidation products [of hydrocarbon oils], (P.), B., 972.

manufacture of dibasic acid salts, (P.), B., 973.

James, J. H., and Byrnes, C. P., intermediate partial oxidation product and its manufacture, (P.), B., 425.

xanthate mixture, (P.), B., 887.

James, R. W., and Brindley, G. W., quantitative study of the reflexion of X-rays by sylvine, A., 74.

James, R. W., Brindley, G. W., and Wood, R. G., quantitative study of reflexion of X-rays from crystals of aluminium, A., 1367.

James, T. C. See Hanson, N. W.

James, T. R., [laboratory] gluten-washing machine, B., 657.

Jamieson, G. S., and Gertler, S. I., American safflower-seed oil,

pecan [Hicoria pecan] oil, B., 987.

Jamieson, G. S., and McKinney, R. S., composition of California walnut oil, B., 332

palm oil from the Belgian Congo, B., 608. methods of cottonseed analysis, B., 689.

Jamisson, G. S. See also Baughman, W. F., and Hann, R. M. Jamison, W. K. See Mathewson, S. B.

Jancke, W. See Herzog, R. O. Jander, G., and Aden, T., alteration of the optical absorption in the visible and ultra-violet regions through aggregation processes in alkaline and acid solutions of amphoteric hydroxides, A., 1385.

Jander, G., Busch, F., and Aden, T., amphoteric hydrated oxides, their aqueous solutions and crystalline compounds. VII. Effect on aqueous solutions of stannates of change of hydrogenion concentration by addition of hydrochloric acid, A., 281.

Jander, G., and Faber, H., determination of small amounts of potassium in presence of much sodium by a direct, gasometric method, A., 1030.

preparation of rubidium compounds from carnallite, B.,

Jander, G., Majert, D., and Aden, T., amphoteric hydrated oxides, their aqueous solutions and crystalline compounds. VIII. Tungstates, isopoly- and heteropoly-tungstic acids, A., 664.

Jander, G., and Pfundt, O., conductometric titrations and the measurement of the resistances of electrolytes by a visual mothod, A., 652.

Jander, G. See also Fehn, H., and Schorstein, H. Jander, W. [with Rothschild, K.], equilibria of sulphides and silicates in fusions, A., 31.

Janes, P., apparatus for producing an intimate mixture of several media by means of centrifugal force, (P.), B., 191.

producing an intimate mixture of several media by means of centrifugal force, (P.), B., 498.

Janet, C., helicoidal classification of the elements, A., 971. Janicsek, M., alkaloid content of chlorophyll from Datura stramonium leaves, A., 1348.

Hungarian essential oils, B., 797.

Janke, A., and Holzer, H., nitrogen circulation. I. Proteolytic power of microbes in general and of B. coli in particular, A., 1493.

Janke, A., and Kropacsy, S., determination of hydrogen exponent by means of the step-photometer, A., 1348.

Jansen, B. C. P., isolation of anti-beriberi vitamin, A., 1344. Jansen, M.,  $\beta$ -2:4:5-trimethoxyphenylethylamine, A., 1175.

Jánský, A., determination of iodoform, B., 934.

Janssen, G., comparative acid tolerance of some Southern legumes, B., 758.

Janssen, G., and Bartholomew, R. P., translocation of potassium in tomato plants and its relation to their carbohydrate and nitrogen distribution, A., 960.

Janssen, G. See also Bartholomew, R. P., and Metzger, W. H. Janssen, L. W. See Bendien, S. G. T. Janssens, T. See Wuyts, H.

Jansson, B. See Euler, H. von.

Jantsch, G., and Abresch, K., complex sulphites, A., 661. Jantsch, G., Alber, H., and Grubitsch, H., europium halides, A., 1407.

Jantsch, G., and Meckenstock, K., chromic p-toluenesulphonates, A., 1052.

Jantsch, G. Sec also I. G. Farbenind. A.-G.

Jantzen, E., and Sohmalfuss, H., evaporation at low temperatures [in the laboratory], B., 77.

evaporation at low temperatures, B., 837.

Jantzon, H. See Völtz, W.

Janvier, W. See Treleaven, H. W. Janzig, A. C., and Montank, I. A., elimination of false presumptive tests [in the bacterial analysis of water], B., 76. high-manganese effluents from idlo [drinking-water] filters,

B., 1034.

Jardin, L. C. P., treatment of sheets of cellulose pulp for use particularly in the manufacture of viscose, and apparatus therefor, (P.), B., 280.

Jarisch, A., and Gaistöck, F., circulation during hyperæmia following anemia, A., 464.

Jariwala, L. Sco Tillmans, J. Jarrier, P., various methods of calculating the calorific value of solid fuels, B., 966.

Jarussov, S. S. See Askinasi, D. L.

Jarussova, N., influence of cooking on the nutritive value of food, B., 491.

Jaszczołtówna, II. Seo Jabłczyński, K.

Jaszovszky, J. von, production of mixed gas from tar-free illuminating gas and water-gas, (P.), B., 587.

Jaubert, G. F., colloidal diaphragms for electrolytic cells, (P.), B., 362.

Jaubort, G. F., and Société Ammonia, separation of hydrogen from gaseous mixtures [coke-oven gas], (P.), B., 933\*.

Jaumá, J. See Hernández, F.

Janney, G. E. M., Heisenberg's indetermination principle and the quantum, A., 973.

Jauncey, G. E. M., and Bauer, Hans, temperature and the

Compton effect, A., 1120.

Jauncey, G. E. M., and Claus, W. D., atomic structure factor and Fourier analysis, A., 1360.

Jausseran, G., evolution of the latent image, B., 340.

Javillier, M., nucleic phosphorus of tissues and its determination, A., 1098.

Javillier, M., Rousseau, S., and Emerique, L., composition of tissues in avitaminosis-A: phosphorus, lipoid extract, and cholesterol, A., 465.

Jaworski, P., and Bismarckhütte, gas producer, (P.), B., 87. Jay, M. S. See Stanley, W. M.

Jayles, P., electrolytic chlorination of benzene in methyl alcohol, A., 1403.

Jazyna, W., internal specific heat. I., A., 1225.

Jeannin, R., and Berline, R. M., treatment of liquids with reagents, (P.), B., 3.

Jebens, W. J. See Olin, H. L.

Jebsen-Marwedel, H., fractional crystallisation of technically pure glasses, B., 208.

Jedlička, M., methyl and ethyl alcohols in sugar-beet pulp, B., 489. Jedrzejovski, H., groupings of radioactive atoms, A., 620. Jedrzejovski, H. See also Herszfinkiel, H.

Jeffrey, J. A., Riddle, F. H., and Champion Porcelain Co., use of dumortierito, (P.), B., 816.

Jeffreys, H., average life period of an atom, A., 117.

Jeffries, Z., Archer, R. S., and American Magnesium Corporation, heat-treatment of magnesium alloys, (P.), B., 60.

Jeglinski, H. See Dietrich, K. R.
Jegorova, K. See Kostytschev, S.
Jelakov, J., fat in the residual material remaining after the

unwinding of the silk cocoon, B., 26.

Jellinek, K., heterogeneous equilibria in the gaseous phase in

presence of appreciably volatile solids, A., 1145.

Jellinek, K., and Deubel, A., reduction equilibrium of lead sulphide and the chemical constants of sulphur and hydrogen sulphide, A., 1012.

Jellinek, K., and Rosner, G. A., measurement of vapour pressures at high temperatures by a transference method, A., 1262

Jellinek, K., and Rudat, A., vapour pressures of lead iodide, cuprous iodide, cuprous bromide, silver iodide, and silver bromide by a modified transference method, A., 1226.

hydrogen reduction equilibria of metal chlorides, bromides, and iodides at high temperatures, and the chemical constants of chlorine, bromine, and iodine, A., 1237.

Jellinghans, W. See Tammann, G.

Jenckel, E., coloration of thin layers of silver iodide in light, A., 522.

different reduction velocities of gold chloride by arsenious oxide, dissolved as glass or crystal, A., 1149.

Jendrassik, A., and Keményffi, A. G., vitasterol-D. II. Activation of ergosterol, A., 104.

Jendrassik, L., and Donhoffer, S., absorption of calcium by the musculature of the small intestine during the action of adrenaline, A., 102.

Jenkin, C. F., and Lehmann, G. D., high-frequency fatigue [of metals], B., 777.

Jenkins, F. A., separation of the isotopes of chlorine, A., 115. Jenkins, F. A., and De Laszlo, H., structure of the violet bands of

silicon nitride, A., 238. Jenkins. F. A. See also Brice, B. A., and Rosenthal, (Miss)

J. E.

Jenkins, G. E., Phytolacca, A., 961. Jenkins, R. C. See Murphy, L. C. Jenkins, R. G. C. See Bourdillon, R. B.

Jenkins, S. H., and Sinnatt, F. S., propagation of a zone of combustion in coal. V. Effect of temperature; temperature of spontaneous propagation, B., 81.

Jenkins, S. S. See Buck, J. S. Jenkins, W. J., and Imperial Chemical Industries, Ltd., nitrocellulose solutions, (P.), B., 293, 333.

nitrocellulose products [lacquers, etc.], (P.), B., 365.

nitrocellulose solutions and coating compositions, (P.), B., 366, 483.

[production of coloured] nitrocellulose products, etc., (P.), B., 483.

colouring of cellulose esters and of solutions or compositions containing such esters, (P.), B., 596.

Jenkins, W. J. See also Imperial Chem. Industries, Ltd., and

Payman, J. B.

Jenkins & Co., Ltd., W. J., and Goodman, R. M., conveying and quenching of coke, (P.), B., 509.
Jenkinson, T. A. Sco Hodgson, H. H.
Jenkner, A. Sco Lindner, J.

Jenks, G. E., and Hercules Powder Co., refining of wood rosin, (P.), B., 180.

Jenks, W., [pendant] apparatus for filtering and treating air [of rooms], (P.), B., 540.
Jenness, L. C. See Leavitt, H. W.

Jenny, H., relation of temperature to the amount of nitrogen in soils, B., 407.

Jensen, A., pasteurisation of liquids, (P.), B., 192. apparatus for pasteurising liquids, (P.), B., 499. reconstruction of liquid mixtures, (P.), B., 801.

Jensen, A. V., rotary cement-burning kilns, (P.), B., 325. Jensen, H., and Chen, K. K., Ch'an Su, the dried venom of the

Chinese toad; isolation of adrenaline, A., 840.

Jensen, H., Wintersteiner, O., and Geiling, E. M. K., crystalline insulin. VIII. Isolation of crystalline insulin from fish islets and pig's pancreas; activity of crystalline insulin, A., 851.

Jensen, H. Sce also Chen, K. K.

Jensen, H. L., influence of the carbon: nitrogen ratios of organic

material on the mineralisation of nitrogen, B., 183.

Jenssen Co., G. D. See Strindlund, J. Jentzsch, F. See Ehrenberg, W.

Jephcott, H. See Bacharach, A. L.

Jepson, D. See Electro Bleach & By-Products, Ltd.

Jeremiassen, J., and Aktieselskapet Krystal, precipitation of solid substances in coarse granular condition from solution, (P.), B., 343\*.

Jérémine, (Mme.) E., and Fallot, P., presence of a variety of jumillite near Calasparra (Murcia), A., 536.

Jermolenko, N., alteration of surface tension of gelatin with change of  $p_{\rm H}$  and with small electrolyte concentrations, A., 880. catalytic action of selenium on calcium bisulphite solution in

cellulose production, B., 553.

Jermstad, A., keeping properties of opium powder, B., 36.

Norwegian juniper oil. I., B., 536. Norwegian juniper oil. II. Terpenes and other constituents, B., 1050.

Jerzmanovska, Z., See Malachowski, R.

Jessen, V. See Tammann, G. Jessop, G. See Lowry, T. M.

Jessup, A., electrolytic production of metals, especially magnesium, (P.), B., 251.

Jessup, R. D., viscous liquid [rosin solution] mixed and dried in 80% less time, B., 786.

Jette, E., and King, C. V., oxidation of iodide ion by persulphate ion. I. Effect of tri-iodide ion formation on the reaction velocity, A., 771.

Jette, E., and West, W., fluorescence and photo-sensitisation in aqueous solution. II., A., 8.

Jette, E. See also King, C. V., and West, W.

Jevons, W., band systems of the fluorides of beryllium and magnesium, A., 238.

band spectrum of lanthanum monoxide, A., 1207. Jewett, E. L., cataphoresis of lead sulphate, A., 1021.

Jezewski, H., new bands of mercury hydride in the ultra-violet,

ultra-violet spectra emitted by a mixture of hydrogen and mercury vapour, A., 119.

effect of mercury vapour on the continuous spectrum of hydrogen, A., 1353.

Jezewski, M., influence of an electrostatic field on the dielectric

constant of liquid crystals, A., 12.

dielectric anisotropy of liquid crystals in a magnetic field, A., 379.

dielectric properties of liquid crystals in simultaneous magnetic and electrostatic fields, A., 380.

Jilek, A., and Lukas, J., titration of thallous salts with permanganate in hydrochloric acid solutions, A., 416.

volumetric determination of thallous salts using potassium permanganate in a medium containing hydrochloric acid, A., 669.

determination of thallous salts using potassium permanganate in a hydrochloric acid medium, A., 783.

gravimetric determination of tungsten in presence of vanadium, A., 785.

separation of bismuth by rapid electrolysis in acid solution, A., 1033

electro-analytical determination of thallium as thallic oxide, A., 1159.

Jilck, A. See also Hanus, J., and Lukas, J.
Jillings, C. S., and Berg, W. E., manufacture and ornamentation of building bricks and clay or like products, (P.), B., 817.

Jirgensons, B., coagulation of strongly solvated sols by organic substances and salts. III., A., 507.

general principles underlying oxidation-reduction reactions and chemical combination. I., II., and III., A., 896, 1218. Jirotka, B., prevention of corrosion of articles made of aluminium

and aluminium alloys, (P.), B., 288. production of coatings on aluminium and its alloys, (P.), B., 288.

Jirotka, B., and Sprenger Patentverwertung Jirotka m.b.H., O., apparatus for producing hard, homogeneous fuel or similar objects from peat, peat moss, lignite, etc., (P.), B., 46\*.

Jirotka, B. See also Sprenger Patentverwertung Jirotka m.b.H.,

Jirouch, E. A., natural colour preserved in sectioned green plant tissue, A., 360.

Jirsa, F., and Kraupner, B., alkaline [electric] accumulator, (P.), B., 362.

Joachimsohn, K. See Freundlich, H.

Joassart, N., and Leclerc, E., preparation of a stabilised electrode and its use in the determination of halogens, A., 785.

Job, A. See Grasselli Dyestuff Corporation.

Job, F., and Tao, L. O., aquopentammino- and diaquotetrammino-cobaltic sulphates, A., 1409.

Jochims, J., connexion of ropiness and structure in egg-white, A., 341.

Jodidi, S. L., and Peklo, J., symbiotic fungi of cereal seeds and their relation to cereal proteins, A., 857.

Jodrey, E. W., manufacture of electrical condensers and materials therefor, (P.), B., 290.

Joel, H. F., [coir-bound electrodes for] electric secondary batteries or accumulators, (P.), B., 291.

Jörg, P. See Grasselli Dyestuff Corporation.

Joffe, A. See Mainzer, F.

Joffe, J. S., soil profile studies. I. Soil as an independent body and soil morphology, B., 730.

Joffe, J. S., and Lee, L. L., determination of volume-weight of different soils in the soil profile, B., 222.

Joffe, M. See Pines, A.

Jog, D. S., intercombinations in the arc spectrum of carbon, A., 366.

spectrum of carbon, A., 964. spectrum of trebly-ionised argon, A., 1118.

Joglekar, R. B., and Watson, H. E., physical properties of pure triglycerides, B., 101.

Johannsen, A. See Grasselli Dyestuff Corporation.

Johannsen, F., and Krupp Grusonwerk Akt.-Ges., F., production of metallic [zinc] sulphate [from sulphide ores], (P.), B., 851\*. treatment of sulphide ores or sulphidic metallurgical products, (P.), B., 900\*.

Johanson, H., and Köppel, G., fine-grinding mills, (P.), B., 875.

Johansson, C. H. See Borelius, G.
Johansson, H. See Euler, H. von.
Johansson, K., [gudmudite, plumboferrite, hæmatophanite, and jacobsite], A., 788.

Johlin, J. M., interfacial adsorption as a factor in the clotting of blood-plasma, A., 339.

John, A. S., preparation of charges for use in internal-combustion engines, (P.), B., 509, 548.
John, F. See Clar, E.

John, H. [with Schmied, M. E.], quinoline derivatives. X Synthesis of substituted 2-phenyl-4-ethylquinolines, A., 577.

Johner, H. See Staudinger, H. Johns, F. C., variations in silver assaying, B., 286.

Johns-Marville, Inc. See Walsh, J. H. Johnson, A. H., Herrington, B. L., and Scott, S. G., wheat and flour studies. XV. Use of the viscosimetric method for measuring the proteoclastic activity of flours, B., 657.

Johnson, A. H., and Whitcomb, W. O., comparison of some properties of normal and frosted wheat, B., 414.

Johnson, C. A. See Rising, M. M.

Johnson, C. C., salicylates. XVII. Phosphoric acid distillation method of determining salicylic and salicyluric acids, A., 478. Johnson, C. C., and Hanzlik, P. J., salicylates. XVIII. [Pharm-

acological] actions of ammonium salicylate compared with [those of] sodium salicylate, A., 1105.

Johnson, C. H. Sec Schmitt, F. O. Johnson, E. M. See Valleau, W. D.

Johnson, E. N. See King, P. E.

Johnson, H. L., therapeutic agent for treatment of bodily lesions, (P.), B., 302.

Johnson, J. D. A.See Elson, L. A., and Gibson, C. S.

Johnson, J. R. See Landrieu, P. Johnson, M. C., adsorption of hydrogen on the surface of an electrodeless discharge tube, A., 639.

Johnson, R. C., band spectra of the alkaline-earth halides. Calcium fluoride, strontium fluoride. II. Barium fluoride, magnesium fluoride, A., 237

detailed electronic structure of diatomic molecules, with special reference to carbon monoxide, A., 1349.

Johnson, R. C., and Asundi, R. K., new band system of carbon monoxide  $(3^1S \longrightarrow 2^1P)$ ; the Angström band system, A., 739. high-pressure carbon bands and the Swan system, A., 964.

Johnson, R. C. See also Thiessen, R. Johnson, R. N., and Gibson, C. S., use of plaster of Paris and allied

substances for dental models, B., 645. Johnson, T. See Hägglund, E. Johnson, T. B., pyrimidines. CVI. Leuco-bases of dyes con-

taining pyrimidine rings, A., 706. pyrimidines. CVIII. Synthesis of nitrogen-substituted uracils

of known constitution, A., 1313.

Johnson, T. B., and Caldwell, W. T., pyrimidines. CIV. iso-

Uracil and derivatives; methods of synthesis, A., 579. Johnson, T. B., and Gatewood, E., 4-mp-dihydroxyphenyl-

thiazoles, A., 943.

Johnson, T. B., and Harkins, H. H., pyrimidines. CVII. Examination of yeast nucleic acid for 5-methylcytosine, A., 939.

Johnson, T. B., and Hilbert, G. E., synthesis of pyrimidinenucleosides, A., 1464.

Johnson, T. B., and Renfrew, A. G., bacteria. XXIII. Comparative yields of water-soluble protein carbohydrate from

tubercle bacilli from various sources, A., 608.

Johnson, T. B. See also Coles, H. W., Gilman, E., Harkins, H. H., Hilbert, G. E., Hinegardner, W. S., Manske, R. H. F., and Renfrew, A.G.Johnson, T.H., reflexion of hydrogen atoms from crystals,

A., 1358.

Johnson, Matthey & Co., Ltd. See Powell, A. R.

Johnston, A. C., ethyl abietate, B., 690.

Johnston, A. R., toxic effects of amines, A., 468.

Johnston, E. S., potato plants grown in mineral nutrient media, B., 222

Johnston, E. S., and Hoagland, D. R., minimum potassium level required by tomato plants grown in water cultures, B., 336. Johnston, H. L. See Giauque, W. F., and Hobart Manuf. Co.

Johnston, J. See Frear, G. L,

Johnston, J. D. See Traill, R. J. Johnston, L. M., and Farrell, J. L., purification of hydrocarbon oil, (P.), B., 634.

Johnston, R. T., and Flintkote Co., saturation of fibrous material, (P.), B., 241.

Johnston, W. See Caven, R. M. Johnston, W. S. See Naugatuck Chem. Co. Johnstone, F. See Heilbron, I. M.

Johnstone, H. F. See Taylor, E.

Johl, B., apparatus for dyeing textile materials, (P.), B., 775. Jolibois, P., application to the allotropic varieties of phosphorus of Smits' theory, A., 244.

Jolibois, P., and Chassevent, L., reactions between colloidal silica

and lime, A., 410.

Jolibois, P., and Montagne, P., rapid calculation of the degree of dissociation; application to carbon dioxide, A., 138.

Joliot, F., electrochemical behaviour of substances in very dilute solutions, A., 653.

Jolles, Z. See Angeli, A. Jolly, V. G., pigment and vehicle, B., 63.

Jonas, K. G., and Drössel, A., new method for the determination of copper number [of cellulose materials], B., 676.

Jones, A., and United States Smelting Furnace Co., smelting furnace, (P.), B., 561.

Jones, A. B., and Industrial Associates, Inc., production of heavy granular concentrates [from dilute solutions], (P.), B., 801.

Jones, A. O. See Evans, J. Jones, B. See Clarke, S. G.

Jones, Brynmor. See Bradfield, A. E.

Jones, C. R. See Fisher, E. A. Jones, C. W. H., decomposition of methane. I., A., 536.

Jones, C.W.H., Price, W.J., and Webb, H.W., nitrosylsulphuric acid. II., A., 411.

Jones, D. B., and Gersdorff, C. E. F., proteins of the avocado (Persea americana, Mill), A., 730.

Jones, D. B., and Moeller, O., aspartic and glutamic acids in various proteins, A., 85.

Jones, D. B., and Wilson, R., aminodicarboxylic acid fraction

in [wheat] gliadin, B., 187.

Jones, D. B. See also Csonka, F. A., and Nelson, E. M.

Jones, D. C., systems n-butyl alcohol-water and n-butyl alcoholacetone-water, A., 638. Jones (Miss) E. E. See Hilditch, T. P.

Jones, E. G. See Dox, A. W.
Jones, E. H. See Alloy Welding Processes, Ltd.
Jones, E. O. See Clark, B.

Jones, F. A., rotary dryer, (P.), B., 155.

Jones, F. C., respiratory gas masks or face pieces, (P.), B., 662 Jones, G., and Bollinger, G. M., conductivity of electrolytes. Improvements in the oscillator and detector, A., 1161.

Jones, G., and Dole, M., transference number of barium chloride as a function of the concentration, A., 767.

viscosity of aqueous solutions of strong electrolytes with special reference to barium chloride, A., 1385.

Jones, G. W., inflammability of mixed gases, B., 930.

Jones, G. W., and Klick, J. R., inflammability of mixtures of ethyl alcohol, benzene, furfuraldehyde, and acetone, B., 930.

Jones, H., and Whiddington, R., energy losses of electrons in

hydrogen, A., 115.

Jones, H. C. See Neville, H. A.

Jones, H. I., mothproofing of fabrics, (P.), B., 515.

Jones, H. L. See Gilman, H.

Jones, H. T., and Willcox, J. S., soil genetics. I., B., 1025. Jones, H. W., [determination of] lead in white arsenic, B., 641.

Jones, J. A., high-elastic limit structural steels, B., 819.
Jones, J. H., King, J. G., and Sinnatt, F. S., reactivity of coke.
II. Metallurgical cokes, B., 630.

Jones, J. S., ratio of sulphur to phosphorus in Western Oregon soils and losses of sulphur through drainage and cropping, B.,

Jones, L. A., contrast of photographic printing paper, B., 959. Jones, L. A., and Hall, V. C., relation between time and intensity in photographic exposure, B., 960.

Jones, L. A., and Russell, M. E., expression of [photographic]

plate speed in terms of minimum useful gradient, B., 960.

Jones, L. C., Loomis, C. C., and Banks, H. W., manufacture of water pastes of bituminous emulsions, (P.), B., 396.

Jones, L. D., and Blachly, F. E., characteristics of amorphous wax, B., 463.

Jones, L. D., and Sharples Specialty Co., centrifugal machine, (P.), B., 543.

centrifugal treatment of substances, (P.), B., 580.

Jones, L. D. See also Sharples Specialty Co. Jones, L. G., disappearance of nitrate under timothy, B., 408. Jones, L. J. W., rendering explosives non-deliquescent, (P.), B., 494.

Jones, (Miss) M. See Popov, S. Jones, M. D., and Fuller-Lehigh Co., dryer, (P.), B., 496.

Jones, N. C., anode reactions of fluorine, A., 891.

activation of halogens and carbon monoxide, A., 1246. Jones, N. C. See also Bancroft, W. D.

Jones, R. B., photo-electric threshold of a doubly-evaporated film, A., 1121.

Jones, R. N., anomalous magnetic rotation of excited neon, A., 231.

Jones, W. See Murphy, A. F. Jones, W. J. See Davies, W. C., and Gibson, G. C. Jones, W. N., and Smith, M. L., fixation of atmospheric nitrogen by Phoma radicis callunas, and a new method for investigating nitrogen fixation by micro-organisms, A., 1342.

Jones, W. S., Briod, A. E., Arzoomanian, S., and Christiansen, W. G., limitations of the antimony trichloride test for determination of vitamin-A, A., 610.

Jonesco-Matiu. See Ionesco-Matiu.

Jonsson, A. E., vacuum drying apparatus, (P.), B., 496. Joos, G., theoretical meaning of the relations between electrical conductivity and voltage and frequency, A., 20.

Jordahl, A., filter medium for air or gas filters, (P.), B., 500. Jordahl, A., Runback, K. G., and Midwest Steel & Supply Co., Inc., filter [for gases], (P.), B., 460.

Jordan, C. W. See Fulweiler, W. H.

Jordan, F, uniting metallically [welding] the seams of aluminium-plated sheet-iron, (P.), B., 249, 251\*.

Jordan, H., and Chemische Fabrik auf Aktien (vorm. E. Schering), production of condensation products from crude cresol and acetone, (P.), B., 427\*.

Jordan, H. See also Chem. Fabr. auf Aktien (vorm. E. Schering), Du Pont de Nemours & Co., E. I., and Schering-Kahlbaum A.-G. Jordan, H. E., factors contributing to quality of public water supplies, B., 341.

Jordan, H. F. See Harkins, W. D.

Jordan, K. See Schenck, R.

Jordan, L. A., tung oil; possibilities of production within the British Empire, with a bibliography, B., 608.
 Jordan, L. W., and Winchester Repeating Arms Co., binder for

priming compounds, (P.), B., 836

Jordan, O. See I. G. Farbenind. A.-G. Jores, H., course of the distillation and evaporation of solvents and thinners for nitrocellulose lacquers and their mixtures,

Jorgensen, G., auxiliary tables useful in the determination of nitrogen in cattle foods, B., 263.

determination of phosphoric acid in mineral phosphates and fertilisers, B., 515.

Jorgensen, J. R. C., providing a finish to leather, hides, skins, etc.,

(P.), B., 141.

Jorissen, W. P., and Belinfante, A. H., "oxygen activation" or "induced oxidation." XIV., A., 1019.

Jorissen, W. P., and Ongkiehong, B. L., quenching of flames in

atmospheres of a certain composition and at the limits of explosion regions, A., 1243.

extinction of flames, B., 841. Jorissen, W. P., and Tasman, A., attempts to prepare phosphorus trioxide by a method other than by burning phosphorus, A., 662.

Jorpes, E., pentosenucleic acids in the animal organism; pancreas nucleic acids, A., 463. preparation of chondroitin-sulphuric acid, A., 463.

Jorpes, E., and Magnusson, H., micro-determination of free phosphate in blood, A., 339.

Jorpes, E. See also Levene, P. AJorstad, L. H. See Burrows, M. T.

Joséfowicz, E., kinetics of the oxidation of organic compounds by bromine. I. Action of bromine on oxalic acid, A., 655\*. kinetics of the oxidation of organic compounds by bromine. II. Action of bromine on formic acid, A., 771.

Joséfowicz, E. See also Swientoslawski, W.

Joseph, A. F., and Oakley, H. B., properties of heavy alkaline soils containing different exchangeable bases, B., 182.

Joseph, A. F., and Snow, O. W., dispersion and mechanical analysis of heavy alkaline soils, B., 182.

Joseph, T. L., Kinney, S. P., and Wood, C. E., production of highalumina slags in the blast furnace, B., 21.

Josephson, K., monoacyl derivatives of quinic acid. III. Synthesis of 4-p-hydroxybenzoylquinic acid, A., 187.

constitution of l-glucosan [β-glucosan], A., 428.

acyl derivatives of glucose and  $\beta$ -methylglucoside from l-glucosan [β-glucosan], A., 428.

y-acetyl-aβ-isopropylideneglueose and its rearrangement into

ζ-acetyl aβ-isopropylideneglucose, A., 912. derivatives of isopropylideneglucose. I. Rearrangement reactions in carbohydrate group, A., 1044.

triphenylmethyl ethers of di- and tri-saccharides; constitution of maltose, sucrose, and raffinose, A., 1045.

transformation reactions in the carbohydrate group. Configuration of the furoid y-glucose and its isopropylidene derivatives, A., 1278.

Josephy, B. See Beutler, H. Joshi, J. N. See Dunnicliff, H. B.

Joshi, N. V., effect of high concentration of organic or ammoniacal nitrogen on nitrification in soil, B., 141.

Joshl, S. S., decomposition of nitrous oxide in the silent electric discharge. II., A., 404.

decomposition of nitrous oxide in the silent electric discharge. III. Variation of the current and power during the reaction, A., 404.

reactions in ionised gases from the point of view of Faraday's law, A., 619.

decomposition of nitrous oxide in the silent electric discharge. IV. Influence of the addition of foreign gases, A., 521.

Jos-Pe Farbenphoto-Ges.m.b.H., production of gelatin relief plates or films for production of dye imbibition prints, (P.), B., 998.

Jost, F., gaseous oxidation of ammonia and gases containing ammonia, (P.), B, 471.

Jost, F. See also Weltmann, O. Jost, H. See Embden, G.

Jost, W., effect of pressure on the photochemical formation of hydrogen bromide. II., A., 776.

Jost, IF., and Jung, G., effect of pressure on the photochemical formation of hydrogen bromide. I., A., 776.

Jost, W. See also Blüh, O., Bodenstein, M., and Tubandt, G.

Jouis, E. See Brioux, C.

Journal-Box Servicing Corporation. See Potter, T. W.

Journaud. See Lespieau, R.

Jovanović, L. See Mosettig, E. Jovinet, P. L. See Lécorché, H.

Jowett, M., permeability of surviving animal membranes, A., 599.

Jowett, M., and Millet, H., ionisation constants of orthophosphoric acid, A., 650.

Jowett, M. See also Brooks, J., and Millet, H. Jowett, W. M., electrolyte for accumulators, (P.), B., 362.

Joy, B. C. See Simms, F. R.

Joyce, A. G. E. See Brit. Rotary Filter Co., Ltd.

Joye, P., and Demont, P., density of calcium hydroxide, and its rôle in the shrinking of Portland cement, B., 720.

Joyet-Lavergne, P., microscopical tests for glutathione in cells, A., 90.

Judd, B. D., effect of temperature change on the colour of red and yellow Lovibond [tintometer] glasses, B., 18.

Judd, D. B. See Priest, I. G.

Judefind, W.L. See Silica Gel Corp. Judge, E.E. See Henley's Telegraph Works Co., Ltd., W.T. Judy, P.R. See Dennis, L.M.

Jüsten, F., determination of dextrose in urine, A., 1099.

Jugenburg, A., effect of X-radiation on nitrogen and sodium chloride metabolism, A., 214.

Juliard, A., and Ledrut, J., effect of different electrolytes on the electrodeposition of copper, B., 177.

Jumentier, R., wood-preserving agent, (P.), B., 210.

Junell, R., kinetics of the bromination and chlorination of aliphatic nitro-compounds in aqueous solutions of the hydrogen halides, A., 516.

Jung, A., finishing of converter-refined iron in the open-hearth furnace, B., 853.

Jung, A. (Basle). See Egg, C.

Jung, G., electrostriction by dissolved dipole molecules, A., 760. Jung, G. See also Bodenstein,  $M_{\cdot}$ , Jost,  $W_{\cdot}$ , and Schleede,  $A_{\cdot}$ 

Jung, H., composition of phonolite from the Heldburg near Koburg, A., 169.

Jung, M., removal of moisture from solid materials, (P.), B., 307.

Jung, R. See Wartenberg, H. von.

Junge, C. See Pfundt, O.

Jungfer, L. See Thiel, A. Jungkunz, R. See Pritzker, J.

Jungmann, H., lactic acid metabolism of the central nervous system, I and II., A., 93, 598. Jungmann, H., and Kimmelstiel, P., source of lactic acid in the

central nervous system, A., 1333. Junk, A., types of red lead, B., 103.

Junker, O., brass composition and its production, (P.), B., 251\*.

Junkersdorf, P., and Witsch, K., influence of unphysiological nutrition on the composition of the organs and on metabolism. II. Glycogen-forming diet, A., 1483.

Junkmann, K., and Wiechowski, W., active principle of camomile

flowers, A., 1196.

Jupeau, beating of nitrocellulose, B., 873.
Jurist, A. E. Seo Briod, A. E.
Jurjev, J. K. Seo Zelinski, N. D.

Jurkiewicz, J., and Kling, K., action of aluminium chloride on certain saturated aliphatic hydrocarbons, A., 1419.

Jurling, J. G., manufacture of stable, highly acetylated cellulose acetate, (P.), B., 677.

Just, A., manufacture of [cathodes for] electric discharge devices,

(P.), B., 902.

Just, F. See Grasselli Dyestuff Corp., and I. G. Farbenind. A.-G.

Just, H. See Rosin, P.

Justi, E., calorimetric absolute measurement of electrolytic conductivity for high-frequency alternating current, A., 872. Justin-Mueller, E., aminoazotoluene, aminoazotolueneazo-β-

naphthol, and tolueneazoacetotoluidide as cicatrising agents, A., 96.

Juza, R. See Biltz, W., and Hüttig, G. F.

K.D.P., Ltd., drying of mixings of latex and filling materials, (P.), B., 139. production of rubber coatings, (P.), B., 182.

K.D.P., Ltd., and Hauser, E. A., production of shaped rubber objects, (P.), B., 139.

K.D.P., Ltd., and Metallbank & Metallurgische Ges. A.-G., concentration of natural [rubber] lattices, (P.), B., 990.

K.D.P., Ltd. See also Hauser, E.A.K.P.C. Co. See Robinson, S.K.

Kabushiki Kaisha Nihon Seikosho. See Makita, S.

Kačer, F. See Lüttringhaus, A.

Kačírková, K., polarographic studies with the dropping mercury cathode. V. Electro-reduction in acidic solutions of arsenious oxide, A., 1256.

Kada, R., and Ogata, K., fixation of sulphur in coal briquettes, B., 462.

Kadlec, J., regeneration of activated carbons [from treatment of beet-sugar liquors], B., 695.

Kadlec-Fleck, synthesis of [calcium] cyanamide by combination of carbon and calcium nitride, A., 431.

Kälberer, H., Mark, H., and Schuster, C., process of adsorption,

A., 1376. Kälberer, W., and Mark, H., adsorption [of gases at low pressures],

A., 132. adsorption, A., 389.

Kälberer, W., and Schuster, C., adsorption [in gases]. II., A., 757.

Kälberer, W. See also Dohse, H.
Kämmerer, H. See I. G. Farbenind. A.-G.
Käppler, F., and British Booklet Matches, Ltd., matches [in diso form], (P.), B., 266.
Kaesz, S. See Hamburger, R.
Kafuku, K., and Ishikawa, N., synthesis of safrovanillin from

isosafroeugenol, A., 815.

constitution of mylistinol and isomylistinol, A., 924. Kaganov, I. N., and Krasilschikov, B. E., improvement of beetsugar products treated with activated carbon, B., 952.

Kahane, E. See Lematte, L.

Kahanovicz, M., constants of clasticity with respect to the periodic system of the elements, A., 499.

new series in the iron spectrum produced by a highly condensed spark, A., 965.

Kahl, L. See Rütgerswerke A.-G.

Kahlenberg, L., and Closs, J. O., presence of aluminium in plant and animal matter, A., 1098.

Kahlenberg, L., and Krueger, A. C., potentiometric titration of

acids and bases, A., 1255.

Kahn, A., and Société Française des Produits Alimentaires Azotés, manufacture of food, etc. from lower vegetables, (P.), B., 415. Kahn, B. S., and Leiboff, S. L., colorimetric determination of inorganic sulphate in urine, A., 209.
Kahn, B. S. See also Leiboff, S. L., and Roe, J. H.

Kahn, E. J. See Nesmejanov, A. N. Kahn, H. See Goldschmidt, S. Kahn, J. See Waldschmidt-Leitz, E.

Kahn, M., Le Breton, E., Schaeffer, G., and Société Française des Produits Alimentaires Azotés, industrial use of inferior vegetables [yeast, etc.], (P.), B., 834\*. Kahn, O., and Donat, K., is there a stable radium isotope in barium

minerals! A., 233.

Kahra, J., ion-rays, A., 229.

Kailan, A, chemical effects of penetrating radium radiation. XVIII. Action on acetyl and benzoyl chlorides, A., 1406.

Kailan, A., and Antropp, W., velocity of esterification of chloroand fluoro-benzoic acids, ethyl hydrogen phthalate, and abietic acid in ethyl alcohol solutions containing hydrochloric acid, A., 1244.

Kailan, A., and Brunner, G., velocities of esterification of alcohols

in formic acid, A., 655.

Kailan, A., and Hexel, K., velocity of esterification of bromobenzoic acids in glycerol and ethyl alcohol solutions containing hydrochloric acid, A., 1244.

Kailan, A., and Leisek, E., decomposition of persulphates in aqueous solution, A., 148.

Kailan, A., and Schachner, A., velocity of esterification of fatty acids with ethylene glycol and hydrochloric acid, A., 888.

Kaiser, E., natural weathering, and a comparison of chemical and natural weathering of building stones, B., 684.

Kaiser, H., evaluation of liquor cresoli saponatus, B., 452. Kaiser, H. E., Langmeier, A., and Hercules Powder Co., refining

wood rosin, (P.), B., 863.

Kaiser, R. See Metallbank & Metallurgische Ges. A.-G.

Kalaehne, E. See Claus, W., and Wolf, Ludwig.

Kalandyk, S., emission electricity by incandescent tungsten in iodine vapour, A., 1357.

Kalandyk,  $\hat{S}$ ., Kozłowski, L., and Tucholski, T., spectra of metals in explosions of gaseous mixtures, A., 1354.

Kalb, G., crystal habit of calcite from the minerogenetic point of view, A., 747.

Kalb, L, and Falkenhausen, F. (Frh.) von, analytical detection of

the metal-corrosive capacity of papers, B., 553.

Kalff, J., tensile strength and elongation of continuous cellulose fibres, B., 891.

Kali-Chemie Akt.-Ges., and Rhenania-Kunheim Verein Chemischer Fabriken Akt.-Ges., working-up of calcined zirconium-lime products, (P.), B., 718.

production of [citrate-soluble] calcined phosphates, (P.), B., 814.

Kali-Chemie Akt. Ges. See also Rüsberg, F.
Kalichevsky, V. A., and Union Oil Co. of California, decolorisation of kerosene, gasoline, and similar light petroleum distillates, (P.), B., 548.

Kali-Industrie Akt.-Ges., separating substances from gases by cooling, (P.), B., 801.

Kali-Industrie Akt.-Ges., and Thorssell, C. T., production of

nitrogen and hydrogen, (P.), B., 719.
Kali-Industrie Akt.-Ges., Thorssell, C. T., and Kristensson, A., recovery of nitrogen from liquors obtained in the production of potassium nitrate by decomposition of potassium chloride with nitric acid, (P.), B., 322.

production of potassium carbonate, (P.), B., 850.

production of nitrates of the alkalis and alkaline earths, (P.), B., 850.

Kalina, A. See Křepelka, J.

Kalin owski, B., introduction of mercury into benzene derivatives, A., 585.

Kalischer, B., [manufacture of] ink, (P.), B., 180.

Kalischer, G. See Grasselli Dyestuff Corp., and I. G. Farbenind.

Kaliwerke Aschersleben, and Witte, A., production of potassium magnesium sulphate and technical potassium sulphate, (P.), B., 53.

Kalle & Co., manufacture of light-sensitive materials, (P.), B., 624.

Kalle & Co. Akt.-Ges., manufacture of 2-cyanobenzanthrone [and vat dye therefrom], (P.), B., 710.

manufacture of solid stable diazo-compounds, (P.), B., 747. manufacture of tubular bodies from cellulose solutions, particularly viscose, (P.), B., 1011.

manufacture of light-sensitivo materials, (P.), B., 1033.

Kallmann, H., and London, F., quantum mechanics of energy transfers between atoms, A., 487.

Kallmann, H. See also Dorsch, K. E.

Kalman, E., synthetic resins as construction materials in chemical

industry, B., 529.
Kalnin, P., theory of the Perkin synthesis; mechanism of the reaction, A., 63. Kalsing, H. See Gehlhoff, G.

Kaltenbach, M., manufacture of synthetic nitric acid, B., 471.

Kam, E. J. van de. See Wibaut, J. P. Kamai, G. C. See Arbusov, A. E. Kambayashi, Y. See Pineussen, L.

Kameda, T. See Kolthoff, I. M.

Kamei, B. See Saito, Shidzuka.

Kamei, T., behaviour of aminobenzoic acid in the body of lower animals, A., 955.

Kami, Y., some constituents of artificial silk, B., 975. Kami, Y., and Nozaki, M., transverse sections of artificial silk. III. The coagulating bath. I., B., 553.

Kami, Y., and Yamashita, T., absorption of soda by cellulose,

Kamienski, B., metallic-non-metallic electrode pairs, A., 144. Kamijima, G. See Ishida, Y.

Kaminer, B., mol. wt. of petroleum products, B., 7.

Kaminski, V. I., improved Czapek apparatus for determining surface tension, A., 535.

Kaminsky, E. See Kurdjumov, G.

Kamm, E. D., halibut tumour oil, A., 1330. Kammlade, W. G. See Mitchell, H. H. Kamp, J. van der. See Ruzicka, L.

Kampa, E. P., and Hyman, P. N., toxic agent, (P.), B., 700. Kampen, G. B. van, nutritive value of extracted cattle foods,

Kamzolkin, V. P. See Volfkovich, S. I. Kanamaru, K., relationship between amphoteric properties and

purity of cellulose and its derivatives, B., 12. Kanao, S. See Nagai, W. N.

Kanda, S., bioluminescence. VI. Mechanism o Cypridina: luciferin and luciferase, A., 35. VI. Mechanism of luminescence in bioluminescence. VII. Solubility of Cypridina luciferin in

organic solvents, A., 603. Kanda, T. See Bentner, R.

Kandelaky, B. See Thiessen, P. A.

Kandiah, A., and Linstead, R. P., chemistry of the three-carbon system. XXII. Preparation and interconversion of isomeric unsaturated nitriles, A., 1294.

Kane, J. H. See Smith, G. B. L.

Kanegafuchi Boseki Kabushiki Kwaisha. See Muto, T.

Kanevskaja, S. J. See Rodionov, V. M.

Kangro, W., and Flügge, R., action of chlorine on iron oxide, A., 664.

Kania, J. E. A., precipitation of limestone by submarine vents, fumaroles, and lava flows, A., 1263.

Kanisawa, S., influence of calcium salts on snake-venom hemolysis, A., 215.

Kannaluik, W. G., and Laby, T. H., thermal and electrical conductivity of a copper crystal at various temperatures, A., 127.

Kannegieter, S., preparation of urea from urine, A., 464.

Kanno, G. See Kita, G. Kano, Y., and Yamaguchi, B., helium contents and ages of Japanese radioactive minerals from Ishikawa district, A.,

Kantzow, H. G. A. von, fire-resistant [iron] alloy with high electric resistance, (P.), B., 648.

Kanz, A., determination of the permeability of refractory materials

to gas, B., 683. Kao, T. H. See Ewing, D. T. Kao, T. Y. See Fuson, R. C.

Kapeller-Adler, R. See Fromm, E.

Kapitza, P., change of electrical conductivity in strong magnetic fields. I. Experimental results. II. Analysis and interpretation of the experimental results, A., 632.

[property of superconducting metals], A., 871.

magnetostriction of diamagnetic substances in strong magnetic fields, A., 989.

Kapitza, P. See also Fowler, R. H.

Kaplan, D. See Bobtelsky, M. Kaplan, F. See Schönberg, A.

Kaplan, J., active nitrogen, A., 39.

auroral red line, A., 112.

excitation of the aurora green line in active nitrogen, A., 365. stability of the silver atom, A., 373.

existence of metastable molecules in active nitrogen, A., 375. dissociation of hydrogen by collisions of the second kind, A., 379.

heat of dissociation of nitrogen, A., 651 spectrum of the aurora borealis, A., 1120.

Kaplanski, S., and Tolkatschevskaia, N., effect of acids and alkalis on the actual reaction of the tissue and blood, A., 1104.

Kappanna, A. N., kinetic salt effect. II. Velocity of ionic

reactions at great dilutions, A., 516. kinetic salt effect. III. Influence of non-electrolytes on salt effect in ionic reactions, A., 1017.

Kappeler, H., manufacture of artificial [furfuraldehyde-amine condensation] products, (P.), B., 989.

Kappelmeier, C. P. A., titration of strong acids combined with ammonia or organic amines; titration of ammonium salts, amino-salts, and amino-acids, A., 162.

Kappen, H., determination of the saturation condition of soils, B., 487.

vegetation experiments with potassium salts on acid soils, B., 906.

Kapsinow, R., and Underhill, F. P., does feeding with cabbage increase the calcium of rabbit's blood-serum? A., 843.

Kapur, R. N. See Bhatnagar, S. S.

Kapusciński, W., resonance radiation of silver vapour, A., 1207. Kapusciński, W., and Eymers, (Miss) J. G., intensity measurements in the secondary spectrum of hydrogen. II., A., 235.

intensities of the mercury hydride bands, A., 740.

Kapuściński, W., and Jabloński, A., carrier of the absorption and fluorescence bands observed in cadmium vapour, A., 1352.

Kapuściński, W. See also Ornstein, L. S. Kapustinski, A., structure of crystal hydrates, A., 1368.

Kar, K. C., theory of intermittent action and series spectra, A., 1208.

Kar, K. C. See also Sen, R. N.

Kar, S. C., Thomson's experiment, A., 1210.

Karácsonyi, L. P., staling and hydrogen-ion concentration [of bread], B., 187.

rôle of carbohydrates and proteins in staling of bread, B., 375. quick viscosimetric method for measuring the staleness of bread, B., 760.

Karagunis, G. See Fajans, K., and Fromherz, H.

Karashima, J., furan compounds derived from sugars. II. Acetyl derivative of hydroxymethylfurfuraldehyde, A., 450. furan compounds derived from sugars. IV. Compounds from hydroxymethylfurfuraldehyde and acid amides and glycine anhydride, A., 1309.

furan compounds derived from sugars. III. Fate of acetoxymethylfurfurylideneacetic acid in animal organism, A., 1333. Karassik, V. M., action of hydrocyanic acid in frogs, A., 215.

Karassik, V. M., Petrunkina, A., and Petrunkin, M., combination of curare with some proteins and dyes and dependence of this process on  $p_{\rm H}$ , A., 1105.

Karavaev, N. L., and Palkin, A. P., drying of sugar beet and extracting the sugar from it in a diffusion battery, B., 371.

Karayaev, N. M., and Ivanov, A. K., oxidation of sub-Moscow

coal by atmospheric oxygen at different temperatures, B., 344.

Karavaev, N. M., and Rapoport, I. B., coals from the Jakutski Mountain region, B., 344.

extraction of mineral substances from coal, B., 763

Kargin, V. A., electrolytic dissociation constant of hydrogen peroxide, A., 1236. Kargin, V. A. See also Rabinovitsch, A. J.

Karl, A. See Venkateswaran, S.

Karlasch, P. W., chlorination of benzene in the presence of iron and ferric chloride, B., 972.

Karlberg, R., treatment of the surface of roads with sulphite lixivium and a hygroscopic substance, (P.), B., 209. Karlovitz, L. See Kuhn, R.

Karlsen, A., denitrification in uncultivated soils, B., 756.

Karlsson, A. See Holgersson, S. Karman, T. von, heat balance in crystals in the light of quantum mechanics, A., 873.

Karnop, R., and Sachs, G., recrystallisation of metals. II., A., 248.

flowing of metallic crystals under torsion, A., 496.

Kárpáti, J., and Hübsch, M. G., removal of phenols from tars or tar oils, (P.), B., 424.

manufacture of acetic acid from acetylene, (P.), B., 708.

Karpen, V., van der Waals' equation and the principles of thermo-dynamics: the Maxwell-Clausius relation and Clapeyron's formula deduced from this equation, A., 138.

equations of state and thermodynamics, A., 387. Maxwell-Clausius and Clapeyron relations, A., 498.

the Maxwell-Clausius relation without reference to Carnot's

principle, A., 1144. Karplus, H., manufacture of hollow artificial textile threads, (P.), B., 469.

Karpukhin, P. P., new nitro-dyes, B., 428.

2:4-diaminodiphenylamine as an ursol dye, B., 428.

[preparations of ] diphenylamine from chlorobenzene and aniline, B., 635. Karr, W. G., Light, A. B., and Torrance, E. G., opium addiction.

IV. Blood of the addict during morphine administration, A., 846.

Karr, W. G., Schumann, C., and Petty, O. H., effect of synthalin on the respiratory quotient of the diabetic patient, A., 595.

Karrer, E., plastometer, B., 761. meaning and measurement of plasticity, B., 837.

Karrer, P., p-methoxycinnamyl alcohol, A., 61.

potassium permanganate oxidation of carotinoids, A., 679. Karrer, P., and Bachmann, W. E., plant colouring matters. XI.

Karrer, P., Canal, F., Zohner, K., and Widmer, R., lupinine, A., 200.

Karrer, P., and François, G. von, polysaccharides. XL. Enzymic degradation of chitin. II., A., 1430.
Karrer, P., Helfenstein, A., and Widmer, R., plant colouring

matters. X. Crocetin and lycopin, A., 49. Karrer, P., Helfenstein, A., Widmer, R., and Itallie, T. B. van,

bixin, A., 1075.

Karrer, P., and Hofmann, A., polysaccharides. XXXIX. Enzymic degradation of chitin and chitosan. I., A., 915. Karrer, P., Lichtenstein, N., and Helfenstein, A., preparation of

2:4:6-trihydroxybenzaldehyde 4-methyl ether and its tetraacetyglucoside, A., 1450.

Karrer, P., and Mangelli, P. O., polysaccharides. XLI. Behaviour of "Lilienfeld silk" towards cellulose, B., 975.

Karrer, P., and Miki, K., plant colouring matters. XV. The sugar of a-croein, A., 1427. Karrer, P., Salomon, H., and Wehrli, H., plant colouring matters;

carotinoid pigment from maize: zeaxanthin, A., 107 Karrer, P., and Weiss, E., reaction of thiocarbimides and hydrogen chloride with polyhydric phenols, A., 697.

Karrer, P., and Widmer, R., plant colouring matters. XII. Constitution of monardæin and salvianin, A., 574.

Karrer, P. See also Euler, B. von, Euler, H. von, and Faust, O. Karrer, W., cardiac glucoside from Convallaria majalis, L.,

Karsmark, K. A., and Kofler, L., quillaia tincture, B., 870. Kartagener, M., buffer studies. X. Buffering of fæces. II.,

A., 139.

Karver, D. See Ruzicka, L. Kasai, H. See Yaio, H. Kasanof, M. M., [apparatus for] drying or drying and bleaching fabrics, (P.), B., 281.

Kasanski, B., 1:2-dimethyl-3-isopropylcyclopentane, A., 1286. Kasarnovsky, S., physico-chemical properties of antitoxic and normal sera, A., 647.

Kasatkin, A. G. See Voroshcov, N. N.
Kasatkin, N. M. See Voroshcov, N. N.
Kaschtanov, L. J. See Spitzin, V., and Stadnikov, G. L.

Kase, K., physiological action of derivatives of salicylic acid. I., A., 468.

Kase, K., and Seki, K., physiological action of derivatives of salicylic acid. II., A., 468.

Kashima, K., thermal decomposition of primary aliphatic alcohols, A., 1266.

Kasper, C. See Latimer, W. M. Kassel, L. S., further test of the radiation hypothesis, A., 276. thermal decomposition of ozone at low pressures, A., 515. reactions with very large apparent temperature coefficients,

A., 656.

unimolecular reactions, A., 1016. Kassel, L. S., and Schaffer, N. K., oxidation [by potassium permanganate] of benz-o-toluidide at a benzene-water interfaco with special reference to the temperature coefficient of the reaction rate, A., 656.

Kassler, J., determination of molybdenum by reduction of

molybdic acid with zinc, A., 165. determination of molybdenum in steel in presence of tungsten and vanadium, B., 249.

determination of vanadium in steel, B., 601.

determination of manganese in steel by Wald's method, B., 942.

Kassur, A. See Weil, S.

Kastner, R., and Schmolka, H., treating [drying] paper-board, etc., (P.), B., 320. Kasuya, G. See Keimatsu, S.

Katagiri, H., and Yamagishi, G., salt effect on the induction period

in fermentation by dried yeast, A., 1199. Katagishi, H., Ginbayashi, Y., and Matsui, M., anodic behaviour of substituted acetic acids. I. Diphenylacetic acid, A., 521.

Katai, K. See Okuda, Y., and Samejima, M. Katayama, I., bile acids in jaundice, A., 210.

Katénas, C. A., alkaline character of lavas from volcanoes at

Antiparos (Cyclades), A., 1263.
Kathner, A. T., annealing and heat-treating furnace, (P.), B., 858\*. Kato, S., hydrogen-ion equilibrium in the blood. III. Temperature effect on the amphoteric property of oxyhæmoglobin,

Katok, N., electrical phenomena of crystals floating on a saturated

aqueous solution, A., 1370. Katscher, E. E. See Fuchs, K.

Katz, E., production of imitation [antique] leather [from veget-

able fabrics], (P.), B., 895. Katz, G., and Leibenson, E., heart hormone, A., 850.

Katz, J. L. See Weiss, R.

Katz, J. R., freezing of raw rubber. II., B., 219. Katz, J. R., and Samwel, P. J. P., diffusion of high-molecular substances into very thin layers on a water surface and its use as a method of determining the form and size of the molecule and micelle. I. Application to polysaccharides, A., 1046.

form and size of highly complex molecules by spreading of unimolecular layers on a water surface. II. Comparison of

polysaccharides and degraded polysaccharides, A., 1277. Katz, J. R. See also Buchner, E. H., and Wedekind, E. Katzenelbogen, S., sugar in blood and cerebrospinal fluid, A., 950. Kaudela, E., sulphuric acid test of motor benzol, B., 1004.

Kauffman, J. L., and Clark, I. A., decolorising, clarifying, and purifying petroleum, (P.), B., 9.

Kauffman-Cosla, O. See Marinesco, G. Kauffmann, H. O. See Meisenheimer, J. Kauffer, F. [with Halbig, P., and Basel, G.], crotonic acid. By-products in the preparation. II. Addition of water to crotonic acid, A., 1423.

Kaufman, L. E. See Chlopin, V. G.

Kaufmann, E., salabrose (tetraglucosan) in diabetes, A., 209. insulin-like plant extracts. III. Phaseolin, A., 357.

Kaufmann,  $\hat{H}$ . P., introduction of the thiocyano-group into organic compounds, A., 436.

absorption spectra and fluorescence of fats, B., 217.

determination of essential oils by bromometric and thiocyanogen methods. I., B., 264. cacao butter. I. Determination of unsaturated fatty acids of

expressed cacao butter, B., 441. Kaufmann, H. P. [with Barich, H.], bromometric and thio-

cyanometric examination of essential oils. II., B., 493. Kaufmann, H. P. [with Brocke, A.], thiocyanogen value of fats,

Kaufmann, H. P., and Keller, Martin, fats. X. Thiocyanate determination of fats containing linolenic acid; analysis of

linseed oil, B., 135, 401.

Kaufmann, H. P. [with Lutenberg, C.], fats. XIII. Partial addition of halogen to polyunsaturated fatty acids; glyceroyl  $\beta$ -eleostearato and wood [tung] oil, B., 291. Kaufmann, H. P., and Ritter, O., synthetic drugs, V. Preparation of benzyl compounds, B., 452.

Kaufmann, H. P., and Weber, E., synthetic drugs. IV. Synthesis of sulphur compounds, B., 452.

Kauko, Y., water-gas equilibrium and the temperature of the flame, B., 82.

Kaul, R., Ray, A. C., and Dutt, S., constitution of active principle of Embelia ribes. I., A., 1306.

Kaunitz, H. See Fürth, O. Kaupp, E. See Eisenhut, O.

Kautsky, H., and Blinoff, G., siloxen as adsorbent, A., 257.

Kautsky, H., and Piannenstiel, A., manufacture of hyposulphurous acid and its salts and derivatives, (P.), B., 206.

Kautz, S. See Posner, T.

Kavina, J., decomposition of silicates by strontium salts for the determination of alkali metals, A., 163.

Kawagoye, M. See Shinoda, J. Kawai, H., hamatoporphyrin hamolysis, A., 1191.

Kawai, S. See Kumagai, T. Kawai, T., effect of proteolytic enzymes on benzoyl- and deamino-

derivatives of polypeptides, A., 1198. Kawakami, M., heat of mixing of molten metals. IV., A., 1013.

Kawakami, T. See Pincussen, L. Kawakami, Y. See McBain, J. W.

Kawamura, C., influence of temperature on acetaldchyde production [in blood or organs], A., 1489. Kawamura, K., and Yokoyama, Y., differential flotation process

for mixed sulphide ores, (P.), B., 59.

Kawata, T. See Shiga, T.
Kay, F. See Burns, C. St. C.
Kay, H. D., phosphatases of mammalian tissues. II. Pyrophosphatase, A., 99.

enzymic synthesis of β-hydroxyethyl dihydrogen phosphate, A., 539.

iodine liberator from Laminaria, A., 612. Kay, R. R., and M'Candlish, A. C., factors affecting yield and

quality of milk. I. Age of the cow, B., 487.

Kay, W. B. See Bahlke, W. H.
Kaya, S., magneto-resistance effect in single crystals of nickel, A., 20.

magnetisation of single crystals of cobalt, A., 633. densities of single crystals of iron, nickel, and aluminium, A., 993.

Kaye, G., reaction of urine, A., 1480. Kaye, G. W. C., and Higgins, W. F., thermal conductivity of solid and liquid sulphur, A., 385.

Kaye, M., histological structure of skin and its relation to the quality of the finished leather, B., 692. preservation of hides with brine and salt, B., 729.

microscopical structure of some fish skins, B., 925.

Kaye, M. See also Kernot, J. C.

Kayes, A. E. Sco Internat. Nickel Co. Kazakov, A. V., field experiments with fertilisers in the Tula district, B., 370.

Kazakov, A. V., and Shapiro, S. L., fertiliser experiments in the

Tver district, B., 370. Kazarnirvsky, I. See Andreev, A.

Kazarnovski, I. A., and Zvenigorodskaya, V. M., recovery of copper and zinc from brass scrap, B., 22.

Keane, J. C. See Balch, R. T.
Kearton, W. J., flow of mercury vapour through nozzles, B., 663. Keck, W. E. See Sullivan, J. D.

Keefer, C. E., and Armeling, G. K., fertilising value of Baltimore sewage sludge, B., 114.

Keefer, C. E., and Kratz, H., jun., digesting sewage sludge at its

optimum  $p_{\rm H}$  and temperature, B., 228. Keelan, H. S., Smith, R. B., and Christiansen, W. G., preparation, analyses, and lead-ion concentration of solutions of colloidal lcad, A., 1003. Keeler, L. See Luck, J. M. Keen, A. W. See Naugatuck Chem. Co.

Keen, B. A., hydrometer method for studying soils, B., 142.

Keen, B. A. See also Schoffeld, R. K. Keenan, G. L., optical properties of amino-acids. II. Arginine and histidine, A., 981.

Keenan, G. L., and Weisberg, S. M., optical properties of some salts of gluconic acid, A., 754. Keenan, G. L. See also Schwartze, E. W.

Keenan, R. L., formation of thin films of organic colloids on mercury surfaces, A., 502, 642.

Keenan, R. L. See also Sheppard, S. E. Keene, A. D. See Carpenter, C. H.

Keeping, E. S., dissociation of pure mercury, A., 249.

Keeping, E. S. See also Davies, W. G.

Keersbilck, N. van, cyclopropane derivatives, A., 1163. Keese, H. See Blanck, E.

Keesom, W. H., solid and liquid states of helium, A., 786.

methods and apparatus used in the cryogenic laboratory.

XXII. A cryostat for temperatures below 1° Abs., A., 1136. Keesom, W. H., and Ende, J.  $\hat{N}$ . van den, specific heat of lead at

the temperature of liquid helium, A., 252. Keesom, W. H. See also Borelius, G., De Smedt, J., Gaede, W.,

Gulik, W. van, and Wolfke, M.

Keffler, L. J. P., calorimetric researches. II. Heat of combustion of a proposed secondary calorimetric standard: salicylic acid, A., 267.

Kehrmann, F., and Collaud, C., fluorindenes. X. Derivatives of fluorindene and triphendioxazine, A., 197.

Kehrmann, F., and Zweifel, F., carbazole derivatives. I., A., 196. Keidel, E., influence of titanium white on the fastness to light of coal-tar dyes, B., 293.

Keigueloukis, L., determination of non-tans [in tannin analysis], B., 221.

Keil, A. W., and Schieck, H. G., electrolysis in biochemistry, A., 110.

Keil, A. W. See also Linneweh, W.

Keil, F. See Skita, A.

Keil, H. L. See Titus, R. W

Keil, O. von, and Mitsche, R., influence of phosphorus on graphite formation [in cast iron], B., 720.

influence of silicon on the system iron-carbon-phosphorus, B., 920.

Keilin, D., cytochrome and respiratory enzymes, A., 470.

Keimatsu, S., and Sugasawa, S., indole derivatives. II. Synthesis of indolecarboxylic acids, A., 195.

Keimatsu, S., Sugasawa, S., and Kasuya, G., indole derivatives. III. Synthesis of 3-keto-3:4:5:6-tetrahydro-4-carboline, A., 195. Keiner, E. See Grasselli Dyestuff Corporation.

Kekhoe, R. A., and Thamann, F., excretion of lead, A., 1192.

Kelber, C. See Flammer, E. Keleti, K., production of a substance having disinfectant, cosmetic, tanning, or like properties, and suitable for the treatment of textile materials, (P.), B., 190.

Kelleher, J., theoretical considerations in electric tunnel kiln design, B., 289.

Keller, A. See Zielstorff, W.

Keller, F. See Grasselli Dyestuff Corporation.

Keller, G. See Schonbrunn, J. Keller, H. See György, P.

Keller, H. H., manufacture of reinforced rubber, (P.), B., 530.

Keller, K. See Grasselli Dyestuff Corporation.

Keller, Martin. See Kaufmann, H. P. Keller, Mechtild. See Schmidt, G. C.

Keller, Oskar [with Schöbel, W.], Helleborus group. VII. Constituents of the roots of Helleborus niger and H. viridis; new alkaloids from H. viridis, A., 82.

Keller, Otto, practical apparatus for Fischer's coking test, B., 742.

Keller, R., micro-electroanalysis, A., 413.

electrostatics as a special domain in biochemistry, A., 845.

Keller, T. H., artificial ageing of tobacco, (P.), B., 1032.

Keller, W., influence of tin on the quality [rolling properties] of

Siemens-Martin mild steel, B., 210.

Keller, W. See also György, P.

Kellermann, K., application of spectrographic analysis in steelworks' laboratories, B., 982.

Kellermann, W.F., effect of type and gradation of coarse aggregate on the strength of concrete, B., 777.

Kelley, F. C. See Gen. Electric Co. Kelley, J. O. See Batcheller, H. G. Kelley, K. K., heat capacity of methyl alcohol from 16° to 298° Abs. and the corresponding entropy and free energy, A., 251.

heat capacities of ethyl and hexyl alcohols from 16° to 298° Abs. and the corresponding entropies and free energies, A., 635.

heat capacities of isopropyl alcohol and acetone from 16° to 298° Abs. and the corresponding entropies and free energies, A., 635.

cyclohexanol and the third law of thermo-dynamics, A., 872.

Kelley, K. K., heat capacity of toluene from 14° to 298° Abs.; entropy and free energy of formation, A., 1373.

thermodynamic consideration of the synthetic methyl alcohol process, B., 425.

Kelley, K. K. See also Parks, G. S. Kelley, W. P., and Arany, A., chemical effect of gypsum, sulphur,

iron sulphate, and alum on alkali seil, B., 370

Kelley, W. P., and Brown, S. M., boron in the soils and irrigation waters of Southern California and its relation to citrus and walnut culture, B., 732.

Keliner, L, investigations in the spectral region 20-40  $\mu$ , A., 975. Kelly, C. D., types of bacteria which produce a "caramel" flavour in milk, B., 300.

Kelly, H. E. See Hopkins, R. H. Kelly, J. A. See Trainor, T. R. Kelly, M. W. See Thomas, A. W.

Kelly, T. D., [heat-resisting chromium-iron] alloys, (P.), B., 288. refining and mixing of metals and alloys, (P.), B., 480. generating energy from water or aqueous solutions, (P.), B., 1014.

Kelly, W. J., and Goodyear Tire & Rubber Co., gas-cell fabric,

(P.), B., 241.
Kelly, W. P., and Thomas, E. E., reclamation of the Fresno-type black alkali soil, B., 141, 950.

Kelly, W. V. D., and Du Pont Vitacolor Corporation, M. B., colour photograph and its production, (P.), B., 624.

Kelm, G., centrifugal apparatus for purifying [lubricating] oil

[from internal-combustion engines], (P.), B., 885.

Kelsen, E., apparatus for electrolytically producing metal alloys, (P.), B., 100.

electrolytic manufacture of iron, (P.), B., 1020. Kelsey, C. A. See General Electric Co.

Kelting, M., coke oven, (P.), B., 841.

Kelvin, Bottomley, & Baird, Ltd., and King, F. A., apparatus for testing the effect of light and other influences, (P.), B., 461.

Kemble, E. C., and Guillemin, V., jun., Lyman bands of hydrogen, A., 2.

Kemble, E. C., and Zener, C., two-quantum excited states of the hydrogen molecule, A., 623.

Kemble, E. C. See also Hill, E. L. Keményffi, A. G. See Jendrassik, A.

Kemet Laboratories Co., Inc. See Cooper, H. S.

Kemm, E. See Wessely, F. Kemmer, H., carbon monoxide in gases, B., 765.

Kemmerer, A. R. See Elvehjem, C. A.

Kemp, W., gas analyser, (P.), B., 965. Kemp, W. W., treatment of bono black or char, (P.), B., 87.

Kempi, R., nomography. XIII-XVI., B., 115.
Kempkens, J. See Krings, W.
Kempton, C. H., and Bissell, W., gas burners, (P.), B., 274.
Kendall, A. I. See Friedemann, T. E.
Kendall, E. C., and McKenzie, B. F., [preparation of] dl-alanine, A., 1048.

Kendall, E. C., and Simonsen, D. C., seasonal variations in iodine

and thyroxine contents of the thyroid gland, A., 221. Kendall, F. E. See Heidelberger, M.

Kendall, S. W., manufacture of white lead pigment, (P.), B., 404\*. Kennard, E. H., potential thresholds and radioactive disintegration in quantum mechanics, A., 1125.

Kennedy, A. L., and Plastic, Inc., manufacture of paper, (P.), B., 938\*.

Kennedy, C., and Palmer, L. S., differentiation of vitamins-B, and B<sub>2</sub> in yeast by heat and ultra-violet irradiation, A., 1344.

Kennedy, H. T., critical temperature measurements on carbon

dioxide in small capillaries, A., 755.

Kennedy, J. E., disintegrating apparatus, (P.), B., 626. jaw crusher, (P.), B., 927.

Kennedy, R. P., and Whipple, G. H., muscle-hamoglobin in the fowl, A., 207. Kennelly, V. C. E. See Cummins, H. A.

Kenner, J., [configuration of pentacrythritol. II. Optically active dipyruvic acid pentacrythritols], A., 171.

Kennison, K. R., decolorisation [of water] by storage in cleanbottomed reservoirs, B., 455.

Kenny, W. R. Sec McCrumb, F. R.

Kenrick, F. B., and Giffen, F. J., effect of adsorbed water on the electrical conductivity of powders, A., 1146.

Kensington, A. B., manufacture of fertilisers, (P.), B., 448. Kent, D. W., treatment of feed water for boilers, condensers, etc., (P.), B., 874.

Kent-Blancato Co., Inc. See Blancato, M.

Kentish, W. S., N-methyl derivatives of 2-phenylnaphthylene-1:3-diamine, A., 923.

Kent-Jones, D. W., and Herd, C. W., flour colour tests, B., 262. Kent-Jones, D. W. See also Chitty, C. W.

Kenty, C., and Turner, L. A., surface layers on tungsten and the

activation of nitrogen by electron impact, A., 114. afterglow spectrum of argon, A., 1351.

Kenyon, J. See Holloway, J., and Houssa, A. J. H. Kenyon, M. B. See Lightbody, H. D.

Kepner, D. E., chlorophenol tastes from creosoted wood-stave pipe, B., 76. Keppler, H. See Brigl, P.

Kerament- & Kunststeinwerke C. H. Jerschke Akt.-Ges., production of cold glazes, (P.), B., 247.

Kerckow, F., m. p. apparatus, A., 534.

Kerékgyártó, G., increasing the clastic limit or yield point of tough or plastic metals, (P.), B., 287.
Kerkhof, J. G., roplaccability of methoxy-group in 4:6-dinitro-

m-tolyl methyl ether, A., 439.

Kerlov, R. Sco Boedtker, E. Kermack, W. C., Lambie, C. G., and Slater, R. H., carbohydrate metabolism. IV. Action of hydroxymethylglyoxal on normal and hypoglycomic animals, Å., 844. carbohydrate metabolism. V. Effect of administration of

dextrose and of dihydroxyacetone on glycogen content of

muscle in depancreatised cats, A., 844.

Kermack, W. O., McKendrick, A. G., and Ponder, E., stability of suspensions. III. The velocities of sedimentation and of cataphoresis of suspensions in a viscous fluid, A., 878.

Kermack, W. O., and Smith, J. F., o-nitroacetophenone, A., 700. Kermack, W. O., and Spragg, W. T., colloidal properties of Wassermann antigens. II., A., 1482.

Kermack, IV. O. See also Lambie, C. G.

Kern, E. F., and Rowen, R. W., electrode potentials of copper anodes and copper cathodes, A., 1240. Kern, J. G. See Du Pont de Nemours & Co., E. I.

Kern, R. Sco Wang, C. C.
Kernaghan, (Miss) M. Sco Poindexter, F. E.
Kernen, H. P., making of cheese, (P.), B., 576.

Kernet, J. C., refining and bleaching of fish oils, (P.), B., 565. Kernot, J. C., and Knaggs, J. [with Kaye, M.], swelling of [cod] fish skins in solutions of inorganic and organic acids, A., 1335.

Kerpel-Fronius, E., and Leovey, F., course and duration of experimental uramia and salt content of the brain cortex, A., 1332. Kerpel-Fronius, E. See also Leövey, F.

Kerr, C. A., synthesis of cyclobutane acids. I. Norpinic acid,

Kerr, H. W., identification and composition of the soil aluminosilicate active in base exchange and soil acidity, B., 67. Kerr, J.H.S. See Moriarty, J.J

Kerr, R. N., influence of the polarity of the solvent on the velocity of a reaction, A., 404.

Kerr, S. E., and Krikorian, V. H., effect of insulin on distribution of non-protein-nitrogen of blood, A., 475.

Kerr, W. R., and Read, E. B., determination of iron oxide and

titania in clay refractories, B., 129. Kerridge, P. T., and Winton, F. R., hydrogen-ion concentration of isolated uterus, A., 463.

Kerridge, P. T. See also Havard, R. E. Kerr-Lawson, D. F., pleochroic haloes in biotite, A., 1163.

Kerschbaum, H., hydrogen atom-rays. I. Technical production of hydrogen atom-rays and the action of hydrogen atoms on the Schumann plate. II. Reflexion of hydrogen atoms at crystals and passage of the atoms through thin foils, A., 963. Kerschbaum, M. See Haarmann & Reimer Chem. Fabr. zu

Holzminden G.m.b.H.

Kershaw, A. See Hodgson, H. H.

Kershaw, S. H., safety in manufacture of sulphuric acid by the contact process, B., 775.

Kershaw, W. See Bleachers' Assoc., Ltd.

Kershaw, W. E., and Woodridge, J. L., electrolytic cell, (P.),

Kersten, J., furnace for the decomposition of alkali chlorides, (P.), B., 55\*.

decomposition of chlorides and sulphates of alkaline-earth metals in molten state by steam, (P.), B., 776\*.

Kertész, Z. I., qualitative test for invertase, A., 1106.

Kessel, W., complexity of the terms of the resonance spectrum of tellurium vapour, A., 966.

Kesselring, J. See Wagner, Hans.

Kessler, J., conversion of ammonium chloride into ammonia and hydrochlorio acid, (P.), B., 718.

Kessner, H. Sco Heike, W.

Kesten, H. D., and Zucker, T. F., saponin hamolysis in anamic blood, A., 344.

Kesten, H. D. See also Zucker, T. F.
Kestenbaum, P. P., dependence of swelling on the amount of solid phase, A., 137.

Kestenbaum, P. P. See also Ostwald, Wolfgang.

Kester, E. B. See Palmer, Charles Shattuck.

Kesting, W., characteristic colour reaction of quinones and the atomic grouping CH<sub>2</sub>(C:E)<sub>2</sub> (E=multivalent element), A., 929. Kestner, O., Willstätter, R., and Bamann, E., protease content of pylorus secretion, A., 342. Kettman, G., evaluation of Debye-Scherrer spectrograms, A., 629.

Kettmann, O., determination of silicic acid in milk, B., 225.

Keune, O., testing of hardness of chilled [iron] castings, B., 1045. Keussler, O. von, manufacture of absolute alcohol by the spiritbenzol distillation under pressure, B., 261.

lime treatment for the preparation of anhydrous alcohol, B., 491.

Keve, E., spectrophotometric studies on oxyhæmoglobin, A., 87. Key, A. See Dawson, H. M. Key, K. M. See Coward, K. H.

Keyes, D. B., improved fractionation for cracking processes, B., 271.

manufacture of anhydrous ethyl alcohol, B., 1007.

Keyes, F. G., renaissance of the absorption refrigeration cycle, B., 541.

Keyes, F. G., and National Refrigerating Co., fluid-storing material, (P.), B., 544. Keyes, H. E. Sco Oldright, G. L.

Keystone Chemical & Manufacturing Co. See Ormont, Bernard. Keystone Watch Case Co. See Davis, A. B.

Kharasch, M. S., heats of combustion of organic compounds, A., 511.

Kharit, A. V., and Livschitz, A. I., phosphorus metabolism, A., 599.

Khmelewskaja, L., influence of foreign substances in solution on

the growth of crystals, A., 25. Khotinsky, E., and Poupko, S., preparation of boric esters, A., 1039.

Khünl-Brady, W. See Hölzl, F. Kichline, F. O., and Bethlehem Steel Co., reduction of complex ores, (P.), B., 686.

Kichlu, P. K., and Acharya, D. P., infra-red radiations of active nitrogen, A., 624.

Kichlu, P. K., and Basu, S., active nitrogen, A., 624, 1209.

Kickton, A., and Berg, P., manufacture, composition, and evaluation of Samos wine, B., 373.

Kidd, F., and West, C., retardation of the ripening of pears by exclusion of oxygen, A., 611. Kiddle & Co., Inc., W., and Freygang, W. H., detection of suspended

matter in fluids and operation of means for indicating its presence, (P.), B., 80.
Kidwell, C. H., and Kidwell & Co., Inc., removal of ink spots and

the like, (P.), B., 1012.

Kidwell & Co., Inc. See Kidwell, C. H.

Kieferle, F., and Erbacher, E., determination of small amounts of iodide in presence of much chloride, A., 110.

Kieffer, R. See Magnus, A. Kienle, R. H., and Ferguson, C. S., "alkyd" resins as filmforming materials, B., 444.

Kienle, R. H., and Hovey, A. G., polyhydric alcohol-polybasic acid reaction. I. Glycerol-phthalic anhydride, B., 293.
Kienlin, H., lactic acid in blood during gestation, A., 596.

Kienninger, J. F. See Technicolour Motion Picture Corp. Kieper, K., crystallisation at rest and in motion, B., 343.

Kiesel, A., and Rubin, B., reproductive organs of plants.

Constituents of the pollen-grains of the sugar-beet, A., 857. Kieser, H., photolysis of silver halides in the light of the quantum

theory and the photo-electric effect, A., 277. theory of the photographic process, A., 522.

determination of the ripened nucleus silver in photographic emulsions, B., 227.

determination of ripening silver, B., 265.

Kieser, K., preparation of highly sensitive negative emulsions in the laboratory, A., 135.

Kiess, C. C., interferometer measurements of wave-lengths in the vacuum arc spectra of titanium and other elements, A., 113.

Kiess, C. C., and De Bruin, T. L., arc spectrum of chlorine and its structure, A., 1117. Kiess, C. C., and Meggers, W. F., tables of theoretical Zeeman effects, A., 480. Kiess, C. C. See also Burns, K., and De Bruin, T. L. Kiessling, W. See Noack, K. Kik, M. C. See Sure, B. Kikoin, I. See Dorfman, J. Kikuchi, S., diffraction of cathode rays by mica. IV., A., 124. Kikuchi, S. See also Nishikawa, S. Kikuta, T., and Tobata Imono Kabushiki Kaisha, manufacture of black-heart, malleable, cast iron from white cast iron, (P.), Kilborn, L. G., Soskin, S., and Thomas, J. C., effect of removal of liver on alkali reserve and lactic acid content of blood, A., 460. Kilborn, R. B. See Pierce, H. B. Kilduffe, R. A., and Hersohn, W. W., preparation of colloidal gold solution, A., 135. Kilian, F., manufacture of compressed cakes [from soap powder], (P.), B., 529. Kiliani, H., "normal" structure of aldoses and ketoses, A., 173. preparation of d-gluconic acid, A., 541. butane-aβδ-tricarboxylic acid, A., 541. Killian, C. See Wünschendorff, H. Killian, J. A. See Shattuck, H. F. Killing, E., conditions determining the action of refining agents in the open-hearth furnace, B., 435.

Kilner, A. H., manufacture of a material for covering or wrapping perishable goods, etc.; preservation of foods and other perishable goods, (P.), B., 241. impregnating a continuously moving band of fabric with liquid, (P.), B., 320. Kilp, W. See Lampe, B., and Lühder, E. Kilpatrick, Martin, jun., catalysis in the hydration of acetic anhydride, A., 151. Kilpatrick, Martin, jun. See also Brönsted, J. N. Kilpatrick, (Miss) Mary. See Brönsted, J. N. Kilpi, S., action of hydrogen chloride on alcohol; influence of electrolytes on the reaction velocity, A., 888. action of hydrochloric acid on alcohol. VI. Velocity coefficients, A., 1017. Kimata, T., and Yamamoto, Teiichi, method of electrolytic gold refining adopted by the Hitachi copper works, B., 753. imball, T. B., sweetening of hydrocarbon distillates, (P.), Kimball, B., 843. Kimball, W. S., entropy and probability, A., 1372. Kimmelstiel, P., cerebroside [content of brain], A., 1329. effect of formalin fixation of organs on the extractability of the lipins, A., 1329. microchemical method for determination of cerebrosides, A., 1474. Kimmelstiel, P. See also Jungmann, II. Kimmig, W. S., vacuum tubes, (P.), B., 689. Kimura, H., effect of vitamin-A on hypercholesterolæmia, A., 1111. Kimura, K. See Tsujimoto, M. Kimura, M., and Miyanishi, M., band absorption spectrum of iodine in an extreme ultra-violet region, A., 375. Kimura, M., and Uchida, Y., Raman spectra for certain substances, A., 241. Raman spectra of calcite, aragonite, and aqueous solution of potassium carbonate, A., 1216. Kimura, R., blood-constituents, A., 587. Kimura, W., bromo-derivatives of linolenic acid, B., 482. unsaturated fatty acids of chrysalis oil, B., 607. Kindermann, H., spinning of viscose silk, (P.), B., 126, Kinderman & Co., H., spinning bath for viscose silk, (P.), B., 639. Kindler, K., reactivity and physiological action, A., 1487. Kindscher, E., and Lederer, P., detection of coal tar in mouldings for cable parts, B., 177.

Kindström, C., extraction of nicotine from tobacco and tobacco waste, (P.), B., 737. King, A. J., crystal structure of strontium, A., 749. King, A. J., and Clark, G. L., crystal structure of barium, A., 869. King, (Miss) A. M. See Garner, W. E. King, A. S., temperature classification of the stronger lines of cerium and praseodymium, A., 966. structure of praseodymium lines, A., 1352. design and operation of vacuum furnaces with carbon resistor tubes, B., 858.

King, A. S., and Blrge, R. T., isotope of carbon, mass 13, A., 970.

azonaphthols into their azo-sulphites and their bearing on the structure of a- and \(\beta\)-naphthol, A., 694. regain of stretched fibres and the porous structure of wool, B., 772. King, A. T. See also Barritt, King, C. G. See Averill, H. P. See also Barritt, J. King, C. V., and Jette, E., oxidation of iodide ion by persulphate ion. II. Effect of removing the products of the reaction on the reaction velocity, A., 771. King, C. V. See also Jette, E. King, E. J., determination of silica in tissues, A., 90. King, E. J. See also Baumgartner, L. King, E. L.See Denis, W. King, E. S. See Wilder, F. L. King, F., and King & Co. (Bath), Ltd., F., gas burners, (P.), B., 971. King, F. A. See Kelvin, Bottomley, & Baird, Ltd. King, Harold, diethyl ether. I. Products of autoxidation, B., 451. King, Harold, Rosenheim, O., and Webster, T. A., vitamin-D from sterols of mummified Egyptian brain, A., 610. King, Harold. See also Anslow, W. K. King, Harriette. See Cox, G. J King, J. G., and Manning, A. B., alcohol fuels for use in internalcombustion engines, B., 1040. King, J. G., Tasker, C., and Edgcombe, L. J., assay of coal for carbonisation purposes. II., B., 308. King, J. G. See also Jones, J. H., and Lander, C. H. King, P. E., and Johnson, E. N., tenacity and elongation of artificial silks, B., 90. King, R. O., and Moss, H., measurement of detonation in internalcombustion engines, B., 878. King, R. O. See also Callendar, H. L. King, S. E., urea tolerance test, A., 210. King, T., and Pak, C., comparative studies of ephedrine, r-ephedrine, and \( \psi\)-ephedrine. III. Effects on the nasal mucous membranes, A., 349. King, W. B. See Gilman, H., and Marvel, C. S. King & Co. (Bath), Ltd., F. See King, F. Kingdom, C. F., accuracy in coal sampling, B., 762. Kingdom, K. H. See Gen. Electric Co., and Langmnir, I. Kingman, F. E. T. See Garner, W. E. Kingsbury, S. S., and Markley, K. S., aldehyde condensations with diphenylisothiohydantoin, A., 200. Kinnard, I. F. See Gen. Electric Co.
Kinnersley, H. W., and Peters, R. A., carbohydrate metabolism in birds. I. The relation between the lactic acid content of brain and the symptoms of opisthotonus in rice-fed pigeons, A., 1496. Kinney, C. R., structure of furazan oxides. II., A., 829. Kinney, C. R. See also Gilman, H. Kinney, Le B. W., Bierman, G. H., and White Motor Co., heat treatment of steel, (P.), B., 176. Kinney, S. P. See Joseph, T. L. Kino, K., palmitic acid as a constituent of fusel oil, B., 337. Kinsella,  $\bar{E}$ . See Brit. Celanese, Ltd. Kinsey, E. L., D-line excitation by the green sodium band and the dissociation potential of sodium vapour, A., 225. Kinsky, A. See Goldschmidt, S. Kinzel, W., the seeds of the earth, their coming and going, A., 1345. Kinzie, C.J., physical tests for vitreous enamels, B., 356. Kinzie, C.J., and Titanium Alloy Manufacturing Co., manufacture of coloured opacifying pigments, (P.), B., 862.

Kinzie, C. J. See also Barton, L. E.

Kippe, O. See Haedrich, P.

Kipper, H. B., speeding of chemical reactions, (P.), B., 244. production of alkali cyanides, (P.), B., 244, 393. Kipphan, K. F. See Trautz, M.
 Kipping, F. S., and Murray, A. G., organic derivatives of silicon.
 XXXVIII. Formation of tri- and tetra-phenylsilicane and complex synthetical products from octaphenylcyclosilicotetrane, Kipping, F. S., Murray, A. G., and Malthy, J. G., organic derivatives of silicon. XL. Attempts to prepare unsaturated compounds from phenylsilicon trichloride, A., 947. Kipping, F. S. See also Steele, A. R., and Thompson, R. A. Kiprianov, A. I., reactions of the α-oxides with amino-acid esters.

III. Aromatic amino-acids. IV. Aliphatic and homologous

synthesis and properties of phenyl-β-hydroxyethylaminoacetic

aromatic acids, A., 1422.

acid, A., 1422.

King, A. T., constitutional influences on the conversion of

Kiprianov, G. See Gabel, G

Kirby, J. E. See Gilman, H.

Kirby, M. R. See Dorman, Long & Co., Ltd.

Kirchbach, M. K. See Kirchbach'sche Werke Kirchbach & Co. Kirchbach'sche Werke Kirchbach & Co., [asbestos-bakelite] friction bodies, especially for brakes, (P.), B., 802.

Kirchbach'sche Werke Kirchbach & Co., and Kirchbach, M. K., manufacture of friction material for braking and coupling purposes, (P.), B., 269. Kircheisen, E. See Foerster, F.

Kirchhof, A., purifying metals used for castings, (P.), B., 857. Kirchhof, F., phosphorescence and photochemical activity of some organic and inorganic substances after ultra-violet irradiation, A., 626.

crystallised and light-sensitive gutta-percha, B., 29. topochemical reactions with racked rubber, B., 220.

effect of mixtures of crude ozokerite and agerite on the ageing of rubber mixtures, B., 445.

jellies and gels, B., 579.

crystal structure of Tjipetir gutta-percha; comparison with frozen rubber, B., 924.

vulcanisation without sulphur; vulcanisation by heat or ultra-violet light with the aid of trinitrobenzene and picrie acid, B., 1023.

Kirchhof, H. See Schenck, M. Kirchmayr, F. See Funke, K.

Kirejev, V., semi-empirical vapour-pressure formula, A., 755.

variation of latent heat of vaporisation with temperature, A.,

methods of determining heats of vaporisation of liquid mixtures, A., 1374.

Kirillov, E. A., spectral distribution of the inner photo-effect in the silver halides, A., 276.

Kiritschenko, N. E., carbon dioxide saturation of an ammoniacal solution of sodium chloride and its possible intensification, B.,

Kirk, E. W. See Brit. Celanese, Ltd. Kirk, P. L., and Schmidt, C. L. A., dissociation constants of amino-acids, A., 397.

micro-determination of calcium, A., 1204.

Kirk, P. L. See also Schmidt, C. L. A., and Schmidt, Werner. Kirkby, W. A., and Wheeler, R. V., explosions in closed cylinders. I. Methane-air explosions in a long cylinder. II. Effect of length of the cylinders, A., 147.

Kirkham, A. See Spence & Sons, Ltd., P.

Kirkham, Hulett, & Chandler, Ltd. See Slater, W. F.

Kirkpatrick, P., and Miyake, I., polarisation of the tungsten L radiations, A., 868.

Kirkwood, J. G., dielectric constant of carbon dioxide as a function of its density, A., 1128. Kirmreuther, H., production of absolute alcohol from sulphite-

spirit, B., 676.

Kirmse, E., Schopper, W., and American Metal Co., Ltd., removal of arsenic from ores, speiss, and other metallurgical products,

(P.), B., 857. Kirner, W. R., and Richter, G. H., tetramethylene glycol and tetramethylene chlorohydrin, A., 1164.

a-furfuryl chloride and derivatives. II., A., 1458

Kirpal, A., and Kunze, H., chlorides of tetrachlorophthalic acid, A., 1296.

Kirpal, A. K., and Zieger, K., isomerism of phthalaldehydic esters, A., 1299.

Kirrmann, A., a-bromoaldehydes and their derivatives, A., 795.

Kirrmann, A. See also Fischer, Hans. Kirsanov, A. V. See Oparin, A., and Tschitschibabin, A. E.

Kirsch, G., and Pettersson, H., yield of H-particles, A., 234. Kirschbraun, L., manufacture of motor fuel, (P.), B., 234, 670. [bituminous] emulsion and its manufacture, (P.), B., 646.

manufacture of waterproofing material, (P.), B., 677.

manufacture of fuel, (P.), B., 841. emulsion product, (P.), B., 884.

manufacture of emulsion paints, (P.), B., 948.

production of [bituminous] emulsions or dispersions, (P.), B., 948. Kirschbraun, L., and Belknap, F. L., manufacture of asphaltic products, (P.), B., 633.

motor fuel and its manufacture, (P.), B., 745.

Kirschbraun, L., Clapp, A. L., and Flintkote Co., manufacture of

[waterproof] paper, (P.), B., 677.

Kirschbraun, L., Levin, H. L., and Flintkote Co., production of [bituminous] emulsions or dispersions, (P.), B., 948.

Kirschman, H. D. See Crowell, W. R.

Kirschner, J., production of homogeneous mixtures of aliphatic mineral oils or distillates and aliphatic alcohols, (P.), B., 197.

Kirscht, P. H. See Schenck, R. Kirssanov. See Kirsanov.

Kisch, B., blood-sugar of Selachii, A., 1327.

content of reducing substances in the blood of some invertebrates, A., 1327.

precipitations in gels. I. Influence of an electric field on rhythmic precipitation. II. Single ring precipitation, A., 1382.

Kisch, B., and Leibowitz, J., kinetics of the formation of acetaldehyde in alcoholic fermentation with dried yeast, A., 724.

Kisch, B., Simons, A., and Weyl, P., blood-sugar regulation in mammals. I. Action of cold and hunger on blood-sugar, A., 339.

blood-sugar regulation in mammals. II. Effect of fasting on alimentary hyperglycemia, A., 462.

Kishi, Y., indican formation. I.—III., A., 1195.

Kishner, N., 1-furyl-2-methylcyclopropane, A., 1184. Kislitzin, S. See Gosudarstvennaya Torgovaya Importno-Eksportnaya Kontora Gostorg.

Kiss, A. von, catalysis of the reaction between persulphate and iodine ions. II. Velocity of ionic reactions, A., 772.

Kiss, A. von, and Hatz, (Fil.) L., influence of non-electrolytes on the velocity of ionic reactions, A., 271.

Kiss, J., colloid chemistry of cerebrospinal fluid, A., 342.

Kisser, J., significance of methods of botanical microscopic work for botanical microchemistry and histochemistry, A., 1498. Kissoek, A., production of calcium molybdate, (P.), B., 393.

Kissock, A. Sec also Climax Molybdenum Co. Kist, H. J., ionic arrangement, A., 630.

Kist, H. J., and Zahn, C. W., cause of uneven dyeing of cotton yarn, B., 750.

Kistiakovski, V., molecular state of liquids, A., 22.

Kistiakowsky, G. B., temperature coefficients of some photochemical reactions, A., 659.

Budde effect in bromine and chlorine, A., 776.

Kistiakowsky, G. B., and Lenher, S., homogeneous oxidation of acetylene, A., 1395. Kistler, S. S. See McBain, J. W.

Kita, G., Iwasaki, S., and Masuda, S., viscose. XXIII. Surface tension of viscose during ripening, B., 553.

XXV. Stretching of finished artificial silk in concentrated sulphuric acid, B., 772.

Kita, G., Iwasaki, S., Masuda, S., and Matsuyama, K., viscosity of viscose. I. Change in viscosity of viscose during ripening, B., 713.

Kita, G., Iwasaki, S., Nakashima, T., Masuda, S., and Matsnyama, K., viscose. XXII. Viscosity of viscose, B., 389. K., viscose.

Kita, G., and Kanno, G., acetylcellulose film and its fibre. Relation between the quality of acetylcellulose and its film strength. II. Relation between the conditions of film-making and the quality of the resulting film, B., 319.

Kita, G., Nakashima, T., Onohara, J., and Masui, K., viscose. XXIV. Increasing the tensilo strength of viscose silk, B., 772. Kita, G., Onohara, J., and Masui, K., viscose. XVIII. Spinning.

IX., B., 12.

Kita, G., Onohara, J., and Sakurada, K., viscose. XIX. Pretreatment of alkali-celluloso and the spinning properties, viscosity, and surface tension of viscose prepared therefrom.

XX. Comparison of the properties of steeped and pressed alkali-cellulose, B., 125.

Kita, G., and Sakurada, I. [with Nakamura, Y., Sakurada, K., Onohara, J., and Tomihisa, R.], oxidation of alkali-cellulose by ageing and its importance in the manufacture of artificial silk, B., 749.

Kita, G., and Tomihisa, R., chemistry of viscose, B., 809

Kita, G., Tomihisa, R., and Onohara, J., viscose. XVIII. Spinning. VIII., B., 12.

Kita, G., Uematsu, T., and Masuda, S., acetylcellulose film and its fibre. III. Spinning of acetylcellulose fibre, B., 319.

Kitagawa, M., significance of some auxo-substances in the urease reaction, A., 471.

auxo-substances in the urease reaction, A., 848.

influence of hydrogen-ion concentration on the inactivation of urease by heavy metal salts, A., 848, 1199. Kitaigorodski, I. I., and Rodin, S. V., use of trachyte in the

manufacture of glass, B., 644. natural rocks in the manufacture of bottle glass, B., 815. Kitamura, K., combined sugar and its ratio to total nitrogen in the normal Japanese [blood?], A., 1096.

Kitano, Y. See Mitsukuri, S.

Kitasato, T., metaphosphatase, A., 100. further syntheses of a-keto-acids of the carbohydrate series; a-keto-d-galactonic acid and a-ketomaltobionic acid, A., 680. **Kitasato**, T, and Neuberg, C, osones for the synthesis of ketouronic

acids, A., 679.

Kitasato, Z. See Wieland, H. Kitchin, D. W., and Müller, Hans, anomalous dispersion, absorption, and Kerr effect in viscous dielectrics, A., 242.

Kittler, F. See Wilborn, F.

Kiuti, M., second order Stark effect in Balmer lines, A., 1349. Kizber, I. S., saponifier-emulsifier for fats, B., 727.

Kizberg, I. See Shorigin, P. Kjelsberg, F., and Müller, Arno, properties of butyrates and isobutyrates, A., 48.

Kjörstad, E. A. H. See Dahl, O. Klages, A., treatment of seed, (P.), B., 448\*.

Klaiber, F., electrical and optical behaviour of half conductors. I. Hall effect and conductivity of silver sulphide, A., 1369.

Klanfer, K. See Schindler, W. Klarges, E. See Wieland, H.

Klarmann, E., and Wowern, J. von, chloro- and bromo-derivatives of 2:4-dihydroxydiphenylmethane and their germicidal action, A., 439.

Klas, H. See Schenck, R. Klason, P., pine lignin. VIII. Investigation of pine sap, A., 544. pine lignin. IX., A., 1428.

Klaus, K., fat metabolism of cancer patients, A., 91. Kleber, C. See Flammer, E.

Kleberger. See Glaser, E.

Klee, P., and Petropuliades, S., excretion of choline in urine, A., 95. Kleeman, R. D., properties of substances and mixtures at 0° Abs. connected with change of state, A., 129.

change that a gaseous molecule may undergo between successive

collisions, A., 379.

constant of mass action, A., 396.

thermodynamical properties of the electron and atomic theory, A., 484.

absolute zero of internal energy and entropy, and the corresponding inertness of matter, A., 764.

functional form of the constant of mass action and atomic activation, A., 881. interaction of radiation and the electron, A., 1210.

properties of the electron, A., 1358.

equation of state of a mixture determined from the equations of state of its constituents, and its application in determining the physical and chemical properties of a mixture in terms of those of the constituents, A., 1373.

derivation of the law of mass action, A., 1383.

Klees, A. L., and Combustion Utilities Corporation, lubricating composition, (P.), B., 933.

Klees, A. L., Soule, R. P., and Combustion Utilities Corporation,

wood-preserving composition and fungicide, (P.), B., 817.

Kleiber, E., and Gilardi, P., production of synthetic rubber, (P.), B., 652.

Kleiber, J., light-emission from atoms, A., 2. Kleiderer, E. C. See Shriner, R. L.

Klein, E., and Fleischmann Co., manufacture of yeast, (P.), B., 794\*. Klein, G., apparatus for determination of m. p. under the microscope, A., 1261.

physiology of urea in the higher plants, B., 184.

Klein, G., and Fuchs, W., detection of pyruvic acid in yeast fermentation, A., 1491.

Klein, G., and Linser, H., compounds of aldehydes with dimethyldihydroresorcinol (aldimethone compounds), A., 1292.

Klein, H. See Flemming, W.

Klein, J., production of artificial rock asphalt, (P.), B., 1041.

Klein, L. See Challenger, F., and Whipple, M. C.

Klein, (Miss) M., and Ruth-Aldo Co., apparatus for spinning solutions of cellulose ethers or esters, (P.), B., 773.

Klein, (Miss) M. See also Ruth-Aldo Co., Inc. Klein, O., and Kment, M., human insulin hypoglycæmia. III. Behaviour of the protein fractions of the blood, the bilirubin, blood-concentration, and blood-coagulation, particularly in hepatic disease, A., 92.

Klein, Oskar, and Nishina, Y., scattering of radiation by free electrons according to Dirac's new relativistic quantum mechanics, A., 373.

Klein, P., manufacture of products containing rubber and rubberlike substances, (P.), B., 485.

production of homogeneous deposits from aqueous dispersions of rubber and similar materials, (P.), B., 829.

Klein, P., and Gabor, F., production of shaped objects from aqueous dispersions of organic substances, (P.), B., 30.

Klein, P., Szegvári, A., and Anode Rubber Co., Ltd., manufacture of rubber goods, (P.), B., 485\*, 729\*.

 Kleiner, H. See Wittig, G., and Ziegler, K.
 Kleinfeller, H., elimination of the nitro-group from tertiary nitro-compounds. I. Derivatives of "nitroisobutylglycerol." II. Action of sodium amalgam on derivatives of "nitroisobutylglycorol," A., 908.

Kleinfeller, H., and Eckert, F., unusual instance of "pinacolin"

transformation, A., 929.

Kleinschmidt, E. E., regulation of respiration. XXVI. Carbon dioxide content of brain, A., 587.

Klem, P., mechanical wood pulp, B., 713.

Klemenc, A., and Hayek, E., dissociation constant of nitrous acid, A., 1384.

Klemenc, A., and Klima, L., nitric acid. IV. System nitric acidnitrous acid during oxidation; activation of nitric acid, A.,

Klemenc, A., and Patat, F., behaviour of atomic hydrogen. I. Behaviour towards ethylene, A., 892.

Klemenc, A., and Spitzer-Neumann, E., solubility of nitric oxide in carbon tetrachloride, benzene, and nitrobenzene, A., 1375.

Klement, R., composition of bone skeletal substance, A., 1328.

Klemm, K. See Foerster, F. Klemm, L. See Hinrichs, A.

Klemm, W., thermal expansion of air-sensitive crystalline salts, A., 21.

Klemm, W., and Rockstroh, J., measurement of bi- and quadrivalent compounds of the rare earths. I. Samarium halides, A., 38.

Klemm, IV., Tilk, IV., and Müllenheim, S. von, dilatometric measurements of the expansion with heat of crystalline salts;

Klemperer, O., Geiger point counter; influence of cathode material on the sparking potential, A., 228. critical potential of the Geiger point counter, A., 367.

emission of electrons from a metallic surface by slow positive ions, A., 369.

Klempt, W., determination of tar fog in coke-oven gas, B., 929.

Klenk, E., cerebronic acid, A., 321. Klenk, E., and Härle, R., cerebrosides. VIII. Galactosidosphingosine, the partial fission product of the cerebroside, A.,

Klepsch, W., treatment for protective purposes of articles composed of iron, (P.), B., 133.

Kleucker, E., [occurrence of free, substituted methylenes in chemical reactions], A., 1449.

Klever, E., dehydration of kaolin in relation to the mullite question, B., 719.

Klick, J. R. See Jones, G. W.

Kliegl, A. [with Thomae, E.], isomerism among 9-substituted fluorenes? A., 812.

Klima, L. See Klemene, A.
Kline, W. D., solubility of magnesium carbonate (nesquehonite) in water at 25° and pressures of carbon dioxide up to 1 atm.,

A., 997.

Kling, A., and Lassieur, A., the  $p_{\rm H}$  value of water, A., 1384. Kling, A. J. See Florentin, J. M. F. D.

Kling, K. See Jurkiewicz, J.

Klingelfuss, F, electrodo function and ionic and electronic charges, A., 969.

Klinger, J. D., agent for cleaning and imparting rust-inhibitive properties to steel, (P.), B., 562.

Klinger, M. See Eckert, A.

Klingler, E. See Kornfeld, G.

Klingspor, C., manufacture of waterproof polishing and abrasive

paper, etc., (P.), B., 247.

Klingstedt, F. W., substances accompanying cellulose. I., B., 201.

Klingstedt, F. W. See also Hägglund, E.

Klinke, K., condition of calcium in body fluids, A., 1478.

Klinkmann, G. H. See Koenig, A. Klippel, H. See Trautz, M.

Klitsch. See Köttgen.

Kljatschkina, B., and Strugadski, M., determination of brucine as silicotungstate and analysis of nux vomica, A., 708.

Klobusitzky, D. von, rate of sinking of erythrocytes in relation to the Hofmeister ionic series. II., A., 713.

influence of hydrogen-ion concentration on the precipitation of serum-proteins by salts. II., A., 1095. Klockow, R. F. See Lewis, J. R. Kiodnicki, A. See Chrzaszcz, T.

Kloiber,  $\hat{F}$ . See Faltis, F.

Klopfer, T., terpene- and sesquiterpene-free ethereal oils, B., 1031.

Klopstock. See Wohlgemuth, J.

Klosky, S., [effect of ethyl alcohol on] silver sols, A., 644.

Klosky, S. See also Rock, G. D.

Kless, II. See Wieland, H.

Klotz, L., methyl- and ethyl-protocatechuic aldehydes, B., 635. Klotz, O., production of tough transparent foils from gelatin,

(P.), B., 1025. Klüger, L., and Oesterreichische Sehmidtstahlwerke Akt.-Ges.,

iron alloy for milling tools, (P.), B., 781. heat-resisting [iron] alloys, (P.), B., 781. acid-resisting iron alloys, (P.), B., 821.

Klug, H. P., Mack, E., jun., and Blake, F. C., crystal structure of m-iodobenzoic acid, A., 1368.

Kluge, W., excitation of frictional electricity between metals and non-conductors in relation to the pressure of the surrounding gas and the out-gassing of the metal, A., 250.

Klughardt, A., measurement of colour at lustrous surfaces, B.,

Kluijtmans, C. E., and Proctor, W. H. W., manufacture of malleable cast iron, (P.), B., 287.

Klumb, H., and Pringsheim, P., transition of excited  $2^3P_1$  mercury atoms to the metastable state  $2^3P_0$ , A., 480.

Klumpp, E., pigment and oil, B., 609. pigment form, B., 862.

Klumpp, E., and Meier, H., pigment and oil, B., 989.

Kluyver, A.J., mechanism of alcoholic fermentation, A., 849. Kluyver, A.J., and Struyk, A.P., so-called co-enzyme of alcoholic

fermentation, A., 100 first phases of the chemistry of the dissimilation of the hexoses.

II., A., 354. first chemical phases of hexose decomposition in alcoholic fermentation, B., 261.

Kluyver, A. J. See also Niel, C. B. van.

Kment, M. See Klein, O. Knackstedt, W. See Pomp, A.

Knaff, A., Mayer, L., and Gredt, P., production of ore briquettes, (P.), B., 857.

Knaffl-Lenz, E., and Hofmann, A., determination of ascaridole in chenopodium oils, B., 376.

Knaggs, (Miss) I. E., form of the central carbon atom in pentacrythritol tetra-acctate as shown by X-ray crystal analysis, A., 246.

Knaggs, J. See Kernot, J:C.

Knapp, A., manufacture of paint, (P.), B., 64.

Knapp, A. W. See Moss,  $\hat{J}$ . E.

Knapp, J. H., and Tate, Jones & Co., Inc., calcining furnace, (P.), B., 2.

Knapp, P., resinous material and its manufacture, (P.), B., 728. Knapp, W. See Weiss, R.

Knauer, F., and Stern, O., intensity measurements of molecular rays in gases, A., 490. reflexion of molecular rays, A., 490.

Knauss, C. A. See Gardner, H. A.

Knecht, O., and Chemische Fabrik vorm. Sandoz, manufacture of azo-dyes for dyeing cellulose esters, (P.), B., 512\*.

Kneser, H. O., nature of active nitrogen, A., 6.

Knibbs, N. V. S., production of hydraulic cement, (P.), B., 209. Kniepkamp, H., application of the resonance method to the measurement of the dielectric constants of conducting liquids, A., 12.

mode of action of the electron counter of Geiger and Müller, A., 621.

Knight Corporation, B. B. & R. See Watson, J. C.

Knipp, C. T., and Ludolph, P. C., high vacuum technique; effect

of ionisation on pump speeds, A., 1416.

Knipp, C. T., and Stein, W. S., radiometer effect of positive ions, A., 368.

Knipping, H. W. See Ponndorf, W.

Kniskern, W. H., and Atmospheric Nitrogen Corporation, treatment of gases bearing gaseous synthetic ammonia, (P.), B., 18\*. treating synthesis gases of synthetic-ammonia plants, (P.), B., 776\*

Knithakis, E. See Maignon, F. Knittel, P. S., pulveriser, (P.), B., 306.

pulverising machine, (P.), B., 306.

Knob, M. See Schwenk, E.

Knoblauch, O., and Koch, W., specific heat of superheated steam for pressures between 30 and 120 atm. and at saturation temperatures to 450°, A., 635.

Knoche, R. See Grasselli Dyestuff Corporation.

Knöller, G. See Meber, P. W. Knop, J., Sebor's method of quantitative spectral analysis, A., 41. two reversible oxidimetric indicators and the manganometric determination of hydroferrocyanic acid, A., 670, 1260\*.

Knop, J., and Kubelkova, O., permanganate titration of iron with erioglaucin A or erio-green B as indicator, A., 670, 1260\*.

Knopf, H., chemical processes in the gasification of brown coal, B., 156.

Knorr, A., Weissenborn, A., and Winthrop Chemical Co., Inc., manufacture of unsaturated aldehydes, (P.), B., 936\*.

Knott, J. E., catalase in relation to growth and other changes in plant tissue, A., 105.

Knowles, A. S., and Tar & Petroleum Process Co., treatment of tarry matter, heavy hydrocarbon residues, etc., (P.), B., 706. Knowles, D. W. C. See Niederl, J. B.

Knowles, F., economic possibilities of rice grass (Spartina Town sentii). III. Composition and nutritive value, B., 225.

Knowles, H. B. See Lundell, G. E. F.

Knowles, H. S., and Burkinshaw, IV., [reverberatory] furnaces, (P.), B., 1000.

Knowling, W. M., and Kostevitch, M., purification of petrol, (P.), B., 274.

Knowiton, K., and Pinner, M., carbohydrate content of the alcohol-soluble antigen of tubercle bacilli, A., 608.

Knox, W. J., and Petroleum Conversion Corporation, treatment of compounds preferably of a hydrocarbon nature, (P.), B., 744.

Knudsen, G., Goldschmidt, V. M., and Knudsen, R., refractory building material, (P.), B., 131, 395.

Knudsen, H. R. See Beaumont, A. B.

Knudsen, R. See Knudsen, G.

Knudson, A., and Moore, C. N., antirachitic potency of ergosterol irradiated by ultra-violet light and by exposure to cathode rays, A., 359.

Knudson, A. See also Brit. Thomson-Houston Co., Ltd., and Randies, F. S.

Knudson, C. M. See Pearce, J. N.

Knuth,  $\dot{H}$ , properties and specifications of silica bricks for coke ovens, B., 394.

Knutsen, M. H. See Bechdel, S. I.

Kny-Jones, F. G., and Ward, A. M., preparation and properties of xanthhydrol as a reagent for carbamide, A., 1430. Ko, L. See Shriner, R. L.

Kobayashi, C., adder venom. III., V., VII., and VIII., A., 1196. Kobayashi, H., cataphoresis of glycerophosphatase, A., 847.

Kobayashi, R. Seo Tanaka, Y

Kobayashi, T., pentosuria in rabbits in experimental stasis icterus and following subcutaneous injection of bile acids, A., 596. Kobbé, W. H., and Fleuron, Inc., sulphur-silica composition, (P.), B., 207.

Kobbé, W. H., and Texas Gulf Sulphur Co., hardened plaster product, (P.), B., 174. plaster board, (P.), B., 174.

article made of fibrous material and its production, (P.), B., 513.

Kobel, E., volatilisation at the cathode of the mercury are light, A., 636.

Kobel, M., and Roth, W. A., heat of combustion and dissolution of dihydroxyacetone, A., 398.

Kobel, M. See also Neuberg, C., and Tychovski, A.

Kober, P. A., preparation of potassium and sodium tetrabismuth

tartrates, A., 40.

Kobiolke, A. M., destruction of insect pests in food products and other material, (P.), B., 72, 868\*.

preservation of timber, etc., (P.), B., 558\*. Koch, E. M., and Cahan, M. H., inorganic blood-phosphate, A., 345.

Koch, F. C. See Castland, G. F., and Still, E. U.

Koch, F. K. V. See Bergmann, M.

Koch, H. See Fischer, F., Fries, K., and Tropsch, H.

See Vorländer, D. Koch, O.

Koch, W., foreign ion content of alkali halide phosphors, A., 1364. Koch, W. See also Knoblauch, O.

Kochmann, M., testing of commercial ovarian preparations. A., 102, 1111.

possibility of industrial poisoning with ethylene dibromide, B., 426.

Kochmann, M., and Seel, H., action of chalybeate waters on metabolism, A., 719.

Kochs, sweet musts, B., 618.

Kochs & Co., Ltd., W. E., heat-exchanging apparatus, (P.), B.,

Kocwa, A. See Dziewoński, K.

Kodak, Ltd., Clarke, H. T., and Malm, C. J., manufacture of mixed esters of cellulose, (P.), B., 976\*.

Kodama, K. See Ogawa, I.

Kodama, Shinjiro, catalytic reduction of carbon monoxide under normal pressure. I. Investigation of catalytic activity of metals by means of heating curves. II. Investigation of effect of foreign substances on catalytic activity of cobalt by means of heating curves, A., 773.

Kodama, Shinkyo, influence of copper on mild steel, B., 521. Kodera, Y., fate of acetylcholine in the blood. V. Influence of gum arabic and starch on the fission process, A., 589.

Kodera, Y. See also Plattner, F. Köck, F. See Winkler, F.

Röck, G., Reckendorfer, P., and Beran, F., sulphur dioxide content of air and its influence on the plant, B., 993.

Koefoed, Hauberg, Marstrand, & Helweg A./S. Titan, and Hagerup, S., centrifugal machines, especially for purification or separation

of liquids, (P.), B., 1001.

Kögel, G., relations between the photochemical reactivity and the fluorescence of organic compounds; qualitative fundamental law, A., 409.

Koehler, A., and Marqueyrol, M., copper numbers of cotton, B., 90. Köhler, E., dolomitisation in the Bryozoa reefs of the Zechstein of

Thuringia, A., 169. Köhler, L., Tödt's simplified electrodes for the electrometric

measurement of  $p_{\rm H}$ , A., 528, simple apparatus for direct reading of corrosion of metals, formation of incrustations, and the oxidising power of solutions (Tödt oxidimeter), A., 1034.

Köhler, R., iodine in soil and plants, B., 335.
Köhler, W., influence of grain size on the corrodibility of brass and bronze, B., 602.

Koehler, William, production of magnesium, (P.), B., 24\*. Köhn, M., mechanical analysis of soils. IV., B., 787.

Koehring, Co., and Webb, G. E., [concrete] mixing machines, (P.),

Koenen, T. H. See Pieters, H. A. J.

König, capsule for incinerating [organic materials], A., 459. crucibles with handles for use in ignitions and fusions, A., 1416.

Koenig, A., and Klinkmann, G. H., time function of the light emission of active nitrogen, A., 4.

Koenig, A. See also Bredig, G.

König, Alfred, Müller, Gerhard, and Staatliche Porzellan Manufaktur, filtering apparatus, (P.), B., 343\*

König, J., determination of the fertiliser requirement of soils, B., 951.

Koenig, O., and Lange, E., electrocapillary curve of mercury and its dependence on temperature; absolute values of electrochemical potentials, A., 1371.

König, Otto. See Rheinboldt, H.

Koenigsberger, J., discharge of canal rays and the influence of metal walls, A., 234.

Koepfli, J. B., and Perkin, W. H., jun., synthesis of oxydehydrocorydaline, A., 79.

Köppel, G. See Johanson, H.

Körber, F., yield point of steel at high temperatures, B., 325.

Koerner, O. Sec Thiessen, P. A.

Körösy, F. von, motion of slow electrons in the rare gases, A.,

Körösy, F. von. See also Tausz, J.

Körting & Ahrens G.m.b.H., water-gas producer, (P.), B., 233.

Koessler, K. K. See Hanke, M. T.

Köster, H. See Bergmann, M. Köster, W., influence of finely-divided particles on the coercive force, A., 634.

aluminium and its solid solutions with silicon, A., 996.

intercrystalline corrosion of nickel, B., 212.

influence of heat treatment below the Al point on the properties of technical iron, B., 358.

Koestler, G., and Lörtscher, W., Gerber's acid-butyrometry as a scientific method of examination of milk, B., 620.

Koestler, G., Roadhouse, C. L., and Lörtscher, W., secretion of lipolytically active "rancid" milk, B., 955.

Köszegi, D., volumetric determination of sulphate ion, A., 782. Koetschet, J., and Koetschet, P., aromatic sulphonamides, A., 942. Koetschet, P. See Koetschet, J.

Köttgen, P., and Diehl, R., use of dialysis and electro-ultra-filtration for the determination of the nutrient requirement of soils, B., 654.

Köttgen, P., and Heuser, H., routine mechanical analysis of soils, B., 369.

Köttgen, P., and Klitsch, important physical quality of a heavy soil in natural deposits, B., 31.

Koettnitz, J. P., decomposition of explosives, B., 189.

coking of pitch, B., 1037.
Kötzschke, P., and Pivovarsky, E., corrosion and rusting of alloyed and plain cast iron, B., 97. Kofler, L., and Fischer, Robert, promoting action of saponin on

resorption and the action of cholesterol, A., 721.

Kofler, L. See also Karsmark, K. A.

Kofman. See Cluzet, J.

Kogan, A. I., determination of bromine in sea-water and estuary waters, A., 1029.

Kogan, G., examination of cresol-naphthene soap solutions, B., 26. apricot-kernel oil as substitute for almond oil, B., 332

Kogan, G. V., gases emitted in the manufacture of sulphur dyes, B., 512.

Kogert, H. See Müller, Erich.

Kohlenveredlung, Akt.-Ges., removal of dust from low-temperature gases, (P.), B., 233.

distillation, cracking, and hydrogenation of oils, tars, etc., (P.), B., 1041.

Kohler, E. P., and Richtmyer, N. K., isooxazole  $\psi$ -bases and salts. II., A., 77.

Kohlhaas, A. See Tammann, G.

Kohlrausch, K. W. F. See Dadieu, A.

Kohlschütter, V., topochemical reactions, A., 774.

Kohman, E. F., and Sanborn, N. H., factors affecting the relative potentials of tin and iron, B., 99.

Kohman, E. F. See also Eddy, W. H.

Kohman, G. T., absorption of oxygen by rubber, B., 334.

Kohn, M., and Aron, A., bromophenols. XXXIV. Debromination of bromocresols with zine dust and acetic acid, A., 1439. Kohn, W., effect of hot molasses on exhausted beet slices, B., 107. Kobner, H., and Gressmann, M. L., dependence of the molecular refraction of acids in aqueous solutions on concentration, A., 1385.

Kohner, H. See also Geffcken, W.

Kohnstamm & Co., Inc., H. See Phair, R. A. Kohnstein, B. See Häusler, J.

Kohorn, O. (Freiherr) von, (Kohorn & Co., O.), and Jäger, A.,

production of highly valuable viscose products, (P.), B., 893.

Kohorn, O. (Freiherr) von, (Kohorn & Co., O.), and Perl, A., manufacture of artificial silk from cuprammonium solutions of cellulose, (P.), B., 677.

Kohorn & Co., O. Seo Kohorn, O. (Freiherr) von.

Kohr, A. A., and Koppers Co., coke treatment and product, (P.), B., 385.

Koida, M. See Takei, S.

Kok, F., and Bergmann, W., inorganic constituents of the musculature of the fallopian tubes (of the sow) and their physiological variations, A., 1479.

Kokas, E. von, and Gál, G., resorption. III. Acceleration of resorption by yeast extract, A., 466.

Kokatnur, V. R., preservation of citrus fruit juices, (P.), B., 650. Kokatnur, V. R. See also Stoddard, W. B. Kolbach, P., titration [of worts and beers] by stages, B., 373.

colorimetric determination of acidity in wort and beer, B., 793. Kolbach, P. See also Windisch, IV. Koldajev, B., and Pikul, lipolytic action of saliva, A., 1329.

Kolenko, B. Z., orthites of certain massive rocks of the Transbaikal

region, A., 1418. Kolhörster, W., determination of the direction of γ-rays, A., 116.

Kolhörster, W. See also Bothe, W. Kolitowska, J. H., action of magnesium phenyl bromide on

phosphorus pentachloride, A., 457. Kolitsch, A., paper-making [machines], (P.), B., 750

Kolitsch, H., separation of solid materials, (P.), B., 268 Kolke, F., preparation of clear nitrocellulose lacquers, B., 64.

clarification of nitrocellulose lacquers, B., 690.

Kolkmeijer, N. H., study of physical purity by X-ray powder spectrograms. II., A., 123.

physical purity and powder-röntgenogram, A., 382. allotropy and the determination of densities by means of X-rays, A., 986.

Kolkmeijer, N. H., Dobbenburgh, W. J. D. van, and Boekenoogen, H. A., determination by X-rays of density and axial ratio of hexagonal silver iodide, A., 382

Kollath, R., share of "reflexion" in the total effect of the action

of slow electrons on gas molecules, A., 123.

Kollath, R. See also Ramsauer, C. Kollath, W., water-soluble vitamins and their relation to each

other, A., 852. Kollath, W. See also "Pharmagans" Pharm. Inst. L. W. Gans Akt.-Ges.

Kollbohm, L. See Dents. Babcock & Wilcox Dampfkessel-Werke A.-G.

Koller, G. [with Ruppersberg, H., and Strang, E.], condensation of o-aminobenzaldehyde with ketodicarboxylic and diketocarboxylie esters, A., 937.

Koller, G., and Krakauer, E., constitution of cetraric acid, A., 1459. Koller, G., and Ruppersberg, H., formation of 2-aminopyridine,

A., 329. Koller, G., and Strang, E., synthesis of methyl 2:4-dihydroxybenz-1:10-naphthyridine-3-carboxylate, A., 76.

derivatives of 6:7-benzo-1:8-naphthyridine, A., 1464.

Koller, J. P. See Du Pont de Nemours & Co., E. I.

Koller, K., manufacture of producer gas from coking coals, (P.), B., 235\*.

Koller, L. R., some characteristics of photo-electric tubes, B., 945. "Kolloidchemie" Studienges. m.b.H., Carpzow, J. B., March,  $M_{\cdot}$ , Lenzmann, R., and Sanders, H., deoxidation of oxidised metal surfaces and protection of metal surfaces against oxidation, (P.), B., 781.

production of cements, building, plastering, and coating materials from mud, etc., (P.), B., 853.

Kollstede, A. G. See Ruprecht, L.

Kolmayr, H. See Zinke, A. Kolmer, J. A. See Brown, H.

Kolnitz, H. von. See Remington, R. E. Kolokolov, N. See Poljakov, A. Kolotora, G. S. See Sabinin, D. A.

Kolthari, D. S. See Saha, M. Kolthoff, I. M., "salt error" of indicators in the colorimetric determination of  $p_{\pi}$ , A., 161.

influence of sucrose on the dissociation constant of weak acids in aqueous solution, A., 397.

decomposition of aqueous bromine and bromic acid solutions by charcoal, A., 657.

influence of charcoal on the velocity of the reaction among iodide, iodate, and hydrogen ions, decomposition of thiosulphuric acid, and reaction between phenol and bromine, A., 658.

uranyl zine acetate as reagent for the detection and determination of sodium, A., 783.

titration of potassium ferrocyanide, using diphenylamine as

internal indicator, A., 785.
"water correction" in the measurement of electrical conductivity of very dilute aqueous solutions of electrolytes, A.,

Kolthoff, I. M., and Bosch, W., influence of neutral salts on acidbase equilibria. VII. Apparently anomalous behaviour of a mixture of a weak base and its salt on dilution and on the addition of a neutral salt; dissociation constant of pyridine, pyramidone, and p-phonylenediamine, A., 265.

Kolthoff, I. M., and Goot, E. van der, adsorption of hydroxybenzenes and other aromatic compounds and their replacing action on each other at the interface water-charcoal, A., 640.

Kolthoff, I. M., and Kameda, T., measurement of hydrogen-ion concentration in unbuffered solutions. I. Adsorbent properties of platinised platinum, A., 1410.

Kolthoff, I. M., and Sandell, E. B., volumetric determination of manganese as dioxide, A., 1414.

Komareckyj, S., extraction of iodine from Black Sea algae, B., 355. Komarevsky, W. I., determination of degree of decomposition of peat; determination of cellulose, B., 382.

Komarov, S. A., occurrence of preformed methylguanidine in muscle tissue, A., 1329.

Komatsu, S., biochemical studies on pityrol. I. Introduction, B., 157.

Komatsubara, I. See Izume, S.

Komers, K., treatment of solids with liquids, (P.), B., 498.

Komers, K., and Cuker, K., purification of crystalloid [sugar] solutions, (P.), B., 260. purification of diffused sugar syrup, B., 449.

Kominami, M. See Chikano, M. Komissarov, J. F. See Nekrassov, V. V.

Kommerell, B., effect of thyroid feeding on protein and fat metabolism, A., 851.

Komppa, G., tricyclene group, A., 192.

yy-dimethylpimelic acid, A., 794. tricyclene series, A., 821.

conversion of naphthenic acids into naphthenes, A., 925.

santenol, A., 1075. fenchene series. II. Homologue of isofenchene, A., 1076.

thionaphthen derivatives, A., 1077.

Komppa, G., and Roschier, R. H., fenchene series. I. Ozonisation and constitution of fenchenes, A., 821.

Kon, G. A. R., and Linstead, R. P., catalytic influences in threecarbon tautomerism. I. Sodium alkoxides, A., 927

Kon, G. A. R. See also Dickens, A. H., and Hugh, W. E.

Kon, S. K., photochemistry of vitamin-D, A., 222.

Konapicky, K. See Müller, W. J.

Konarzevski, J., and Krynski, B., effect of water vapour and sulphur dioxide on firing of clays, B., 474\*.

Kondakov, I. L., [products of the addition of chlorine and bromine to pinene and their de-chlorination], A., 323. sylvestrenes and carenes, A., 450.

fenchene, A., 571.

Kondo, protein content of Italian millet, A., 107.

Kondo, H., and Ochiai, E., constitution of sinomenine, A., 1088.
Kondo, K., and Hayashi, T., nutritional chemistry of raw food substances. II. The water melon, A., 106.

Kondo, K., Nakajima, M., and Suzuki, Tetsuo, nutritional chemistry of raw food substances. I. The banana, A., 106.

Kondô, M., Matsushima, S., and Okamura, Tamotsu, germination, food value, and vitamin-B of rice preserved for 4 years in carbon dioxide and air-tight containers, B., 492.

Kondô, M., and Okamura, Tamotsu, storage of rice, B., 736.

Kondo, S., titanium crystal glazes, B., 96.

Kondrateev, V., and Leipunski, A. J., velocity of formation of molecules from free atoms, A., 970.

Kondyrev, N. V., and Sust, A. K., conductivity of magnesium ethyl iodide in ethereal solution, A., 1049.

Konikov, A. P., sensitisation of erythrocytes by amboceptors of specific sera, A., 951. electro-osmosis as the principal factor in specific hamolysis,

A., 952.

Konopicky, K. See Müller, W. J.

Konovalova, B. A. See Spitalski, E. I. Konrad, R. See Grasselli Dyestuff Corporation.

Konstantinovskaya, D. C. See Schazillo, B. A.

Konter, M., distillation apparatus, (P.), B., 876.

Kontol Co. See Fischer, C., jun.

Koopman & Co. See Dunlop Rubber Co., Ltd. Kootz, H. See Stoermer, R.

Kooy, J. See Cohen, E.

Kopaczewski, W. Sec Arciszewski, W. Kopeliovitsch, P. See Michlin, D.

Koperina, A. See Gavrilov, N. J.

Kopfermann, H., and Ladenburg, R., experimental proof of "negative" dispersion, A., 224.

Kopfermann, H., and Tietze, W., line absorption of mercury vapour for the line 2537 A., A., 1119.

Koplowitz, E., micro-determination of creatinine and creatine in

blood, A., 1326.

Kopp, E., oil of Salvia sclarea, B., 36. Kopp, H., determining the effect of water on varnish films, B., 862.

Koppers, H., apparatus for distilling bituminous substances, (P.), B., 509\*. distillation of solid carbonaceous material, (P.), B., 587.

Koppers, H., and Koppers Development Corporation, regenerative channel oven, (P.), B., 44. retort oven, (P.), B., 504.

heating substances susceptible to oxidation, (P.), B., 631. gas retorts, (P.), B., 632, 842.

pitch-coking process, (P.), B., 634. Koppers A.-G., H. See Totzek, F.

Koppers Co., charging of coke ovens, (P.), B., 194. gas-purification process and apparatus, (P.), B., 1005. Koppers Co., and Ackeren, J. van, vertical coking retort ovens, (P.), B., 194.

coking retort ovens, (P.), B., 967.

Koppers Co., and Becker, J., [fuel-]gas purification, (P.), B., 424. separation of tar from gases, (P.), B., 633.

Koppers Co., Becker, J., and Ackeren, J. van, coke ovens, (P.), B.,

Koppers Co., Collins, C. B., and Lovett, J. A. B., pusher rams for coke ovens, (P.), B., 349.

Koppers Co., and Gollmar, H. A., purification of fuel and other gases, (P.), B., 8.

Koppers Co., Jacobson, D. L., and Gollmar, H. A., purification of fuel and other gases, (P.), B., 8.

Koppers Co., and Lovett, J. A. B., [removal of carbon deposits from interior surfaces of coke-oven apparatus, (P.), B., 425.

Koppers Co., and Shaw, J. A., treatment of liquids containing tar

acids, (P.), B., 970.

Koppers Co. See also Ackeren, J. van, Becker, J., Bird, E. H., Fulton, R. R., Gollmar, H. A., Hill, W. H., Jacobson, D. L., Kohr, A. A., Morgen, R. A., Putsch, A., Ramsburg, C. J., Seil, G. E., and Sperr, F. W., jun.

Koppers Development Corporation. See Koppers, H.

Kopsch, U. See Harteck, P. Kordatzki, IV. See Fiehe, J.

Kordes, E., lowering of the vapour pressure in concentrated solutions of two volatile components, A., 994.

Kordes, E., and Raaz, F., determination of the b. p. diagrams of high-boiling liquid mixtures, A., 995.

Korect Air Meter Corporation. See Rochester, T. F. Korelev, A. J. See Tschitschibabin, A. E. Korenchevsky, V., and Dennison, M. H., influence of the pituitary on metabolism, growth, and sexual organs of male rats and rabbits. I. Influence of extracts of pituitary on nitrogen metabolism, A., 1495.

Korenman, I. M., hexamethylenetetramine as a microchemical reagent, A., 286, 1412.

microchemical reactions of salts of certain heavy metals, A., 1413.

Korff, S. A., refractive index of sodium vapour and width of  $D_1$ in absorption, A., 635.

dispersion and absorption line width in the alkali vapours, A.,

Korn, can the mechanical wood-pulp content of paper bo determined to a fraction of a per cent.? B., 279.

correction curves for determination of the degree of grinding [of pulp] by the Schopper-Riegler apparatus, B., 319. sclerenchema in straw cellulose, B., 553.

Kornfeld, G., and Klingler, E., kinetics of the reaction 2NO+  $O_2=2NO_2$  at low pressures and under the influence of a strong magnetic field, A., 887.

Kornfeld, H. See Ammermann, E.
Korolev, A. See Rutovski, B.
Korolev, J. See Sark, A.
Korolkov, K. N. See Barsov, K. K.
Korotkov, K. N., determination of active oxygen in oxidising Russian turpentine, B., 650.

oxidation of turpentine in the open air, B., 989.

Korschev, P. See Stadnikov, G. L.
Korschun, G., and Roll, (Mme.) C., absorption spectra of pyrrole and its derivatives. IV. Ethyl and methyl esters of 1-anilino-2:phenyl-5-methylpyrrole-4-carboxylio acid. V. Certain pyrrolecarboxylic acids and their ethyl esters. VI. Ethyl 2:5-dimethylpyrrole-3:4-dicarboxylate and 2:4-dimethylpyrrole-3:5-dicarboxylate. VII. Ethyl 1-phenyl-2:5-dimethylpyrrole-3:4-dicarboxylate and 1-anilino-2-phenyl-5-methylpyrrolecarb-VIII. Ethyl 2:5:2':5'-bispyrrole-3:4:3':4'-tetracarboxylate. oxylate, A., 487

Korselt, J., manufacture of juices rich in vitamins, from plants, (P.), B., 1032.

Korsunsky, M. G. See Corson, M. G.

Korth, B. See Kremann, R. Kosaka, Y., products and mechanism of the thermal decomposition of benzene, B., 194.

products and mechanism of the thermal decomposition of

phenol, B., 194. Kosakevitsch, P. P., solubility relationships and solvation in nonaqueous salt solutions, A., 1229.

Kosakevitsch, P. P., and Ismailov, N. A., activation of carbon by means of steam, B., 742.

Koschara, W. See Wieland, H.

Kosenko, K. G. See Krasuski, K. A.

Kosfeld, W., use of blast-furnace slag in concrete, B., 324.

Koslovsky, M. T. See Molitzky, W. P. Kosmahly, A. See Ehrlich, F. Kosmin, N. P. See Resnitschenko, M. S.

Kossel, W., limitation of the system of elements, A., 7.

theory of crystal growth, A., 18. Kossodo, M. See Weichselfelder, T.

Kost, H., change of conductivity of cuprous oxide, A., 634.

Kostanecka, W. See Swiderska, M. Kosterlitz, H. See Petow, H. Kostevitch, M. See Knowling, W. M.

Kostjejev, V., use of the Berthelot-Mahler calorimeter, B., 270. Kostka, G., use of ultra-violet radiations in distinguishing between

amber and its imitations, B., 293.

Kostrin, K. V., influence of physical properties and sizes of filling elements in fractionating columns on the fractionating capacity, B., 86.

mazout distillation in Germany and a new process developed

by the Azneft for extracting oil out of heavy bottoms, B., 932. Kostrin, K. V., and Akopov, N. M., dephlegmation, B., 267. Kostytschev, S., and Jegorova, K., alcoholic fermentation. XVIII. Behaviour of yeast to glyceraldehyde and glyceric acid, A., 607.

Kostytschev, S., and Schulgina, O., alcoholie fermentation. XIX. Fermentativo bacteria in maceration juico, A., 724.

Kostytschev, S., and Tschesnokov, V., formation of citrio and oxalic acids by Aspergillus niger, A., 472.

Kotaira, I., cause of the thermal brittleness of cupriferous steel, B., 521.

Kotaira, I., and Maeda, M., properties of manganese in the basic open-hearth process, B., 601.
Kotake, M., toad poisons. VI. Poisonous constituents of Bufo

bufo japonicus,  $\bar{A}$ ., 215. Kotelnikov, V. G., manufacture of ferromanganeso at the Makievka

Works in Central Russia, B., 21

Kothari, D. S., possible origin of faint Fraunhofer lines, A., 967.
 Kothari, D. S., and Gogati, D. V., ultra-short waves and radiation from free electrons, A., 1211.

Kothny, E., durability of the structure of direct-arc furnaces under different working conditions, B., 605.

Kotô, H., reflexion of ultra-violet rays from metallic surfaces in relation of their microstructures, A., 738.

Kotowski, A. See Pietsch, E. Kotrba, J. See Votoček, E.

Kotscheschkov, K. A., action of metallic tin on the dihalogen derivatives of methane, A., 46\*. organo-metallic compounds. I. New class of tin aryl com-

pounds: tin phenyl trihalides, A., 712.

Kotschnev, N., behaviour of various protein degradation products in the intermediate region, A., 213.

Kotsohnev, N. See also London, E. S. Kotzebue, M. H., vapour extractor, (P.), B., 308. Koudelka, V., improvement of brewing waters containing much [calcium] carbonate by lactic acid, B., 490.

Kouniniotis, C. Seo Gränacher, C. Kourtiakoff, N. N., influence of irregularities in the level of soil on its fertility, B., 184.

Kovarik, A. F., and McKeehan, L. W., radioactivity, A., 1210. Kowalski, A., ignition of phosphorus vapour in oxygen, A., 1242. Kowalski, A. See also Sagulin, A. B.

Koyalovich, B. M., densities of water-alcohol mixtures, B., 1029.

Koyama, R., fats of Japanese birds. I., A., 714. Kozeschkov. See Kotscheschkov.

Kozin, N., oil from grape kernels, B., 784.

Kozlowski, A., [bactericidal] action of sodium ricinoleate, A., 356. Koztowska, M., absorption of nutrients by the onion, B., 409. Koztowska, M. See also Górski, M. Koztowski, L. See Kalandyk, S.

Krasy, G. M., 3:4-dichlorofluorobenzene, A., 1170.

Kracek, F. C., polymorphism of sodium sulphate. I. Thermal analysis, A., 1221.

Kracek, F. C., and Gibson, R. E., polymorphism of sodium sulphate. II. Densities of anhydrous sodium sulphate at 25°, A., 1221.

Kracik, A. See Bureš, E. Krägeloh, F. See I. G. Farbenind. A.-G. Krämer, C. See General Electric Co.

Kraemer, E. O., unsolved problems in the molecular-kinetic behaviour of colloidal suspensions, A., 259.

Kränzlein, G., Vollmann, H., Wilke, K., and General Aniline Works, Inc., preparation of a anthraquinonyl ketones, (P.), B., 845\*

Kränzlein, G., Voss, A., Brunnträger, F., and General Aniline Works, Inc., water-soluble, mineral tanning agent, (P.), B., 904\*. Kränzlein, G. See also Grasselli Dyestuff Corp., and I. G. Farbenind. A.-G.

Krafft, K., and Zeitler, G., evaluation of liquor cresoli saponatus according to D.A.B. VI., B., 958.

Krafka, J., jun., endogenous uric acid and homatopoiesis, A., 1195. Kraft, G. See Becker, C. A.

Kraft, H. See Rassow, B.

Kraft, R., peptidase in diseases, A., 1481.

Krait-Phenix Cheese Co. See Eldredge, E. E.

Krais, P., and Biltz, K., determination of fat in wool, B., 891. Krajčinovič, M., products of the action of chlorosulphonic acid on propionyl chloride at the ordinary temperature, A., 540.

Krajčinovič, M. See also Marek, T. Krajuschkina, L. See Rehbinder, P.

Krak, J. B., volatility of selenium and its compounds in the manufacture of ruby glass, B., 940.

Krakauer, E. See Koller, G.

Krakowetz, B. See Margosches, B. M.

Krakowiecki, S. See Miłobędzki, T.

Krall, R. F., and Woodall-Duckham (1920), Ltd., apparatus for separating solids [coal] from liquids, (P.), B., 80\*,

Kramarsic, V. See Rebek, M.

Kramer, B., Shear, M. J., and McKenzie, M. R., composition of VI. Effect of massive doses of irradiated ergosterol, A., 960.

Kramer, B. See also Shear, M. J.

Kramer, E. See Podszus, E. Kramer, H. See Schellong, F. Kramer, H. V. See Somogyi, M.

Kramers, H. A., structure of multiplet S-states in diatomic molecules. I. and II., A., 623.

Kraner, H. M., effect of heat treatment on diatomaceous earth, B., 356.

importance of the glass phase in porcelain, B., 644.

Kraner, H. M., and Fritz, E. H., rate of oxidation of porcelain and ball clays, B., 208.

Kranig, J., complex oxalates and carbonates of tervalent cobalt, A., 527.

Krantz, C. I. See Jackson, H., jun. Krantz, H. J. M. C., centrifugal machine, (P.), B., 913.

Krantz, J. C., jun., incompatibility of sodium salicylate and sodium bicarbonate mixtures, B., 188. huffer capacities of acacia and tragacanth, B., 576.

Krantz, J. C., jun., and Gordon, N. E., emulsions and the effect of hydrogen-ion concentration on their stability, A., 1234. emulsifying properties of certain salts of arabic acid, B., 576. effect of changes of hydrogen-ion concentration on emulsions of the water-in-oil type, B., 861.

Krantz, J. C., jun. See also Pittenger, P. S. Kranz, C., Hrach, V., and Franta, I., iodine value of turpentine oil, B., 1022.

Kranz, F. H., and National Aniline & Chemical Co., Inc., manufacture of hydroxybenzaldehydes, (P.), B., 888.

Kranz, H. See Pummerer, R. Krapf, H. See Geiger, E.

See Geiger, E.

Krase, N. W., and Goodman, J. B., behaviour of carbon dioxide under pressure, and its possible industrial applications under moderate pressure, B., 392.

Krasilschikov, B. E. See Kaganov, I. N.

Krasińska, Z., energetic metabolism of germination (Helianthus annuus), A., 853.

Krasnjanskij, L. M., daily variations of blood-sugar values in man, A., 462.

Krasnokutska, A. See Zaykovsky, J.

Krasnovski, A. V., analysis of phosphorite, A., 162.

Krasteleoskaja, S. A. See Nikolaiev, V. J. Krasuski, K. A., decomposition of  $\alpha$ -amino-alcohols and their salts on heating, A., 1047.

Krasuski, K. A., and Kosenko, K. G., action of piperidine and piperazine on the a-oxides of ethylene, isobutylene, and trimethylethylcne, A., 1078.

hydrochlorides of a-amino-alcohols, A., 1430.

Krasuski, K. A., and Krivonos, F. F., action of ammonia on isopropylethylene oxide, A., 1048. action of isoamylamine on isopropylethylene oxide, A., 1430.

Krasuski, K. A., and Kucenos, V. D., action of ethylamine on isobutylene oxide and isobutylene chlorohydrin, A., 1048.

Kratky, O., silk fibroin. II., A., 1222.

Kratky, O. See also Burgeni, A. Kratz, A. See Weiss, R.

Kratz, H., jun. Seo Keefer, C. E. Kratz, S. R. See Weiss, R.

Kratzer, A., coarse structure of band spectra, A., 1208.

Krauch, E. See Nawiasky, P.

Kraupner, B. See Jirsa, F.

Kraus, C. A., and Brown, E. H., boron. I. Reaction of boron trifluoride with ammonia and alkylamines, A., 1250.

Kraus, C. A., Callis, C. C., and Standard Oil Development Co., preparation of alkyl compounds of lead, (P.), B., 355. preparing metallo-organic compounds [lead ethyl], (P.), B., 427.

process of alkylation [lead tetracthyl], (P.), B., 517. Kraus, C. A., and Glass, S. W., liquid mixtures of tellurium and sodium telluride. I. Specific resistance as a function of composition and temperature. II. Phase diagram of the system tellurium-sodium telluride, A., 995.

Kraus, C. A., and Neal, A. M., tin methyl derivatives; action of zine on tin trimethyl bromide; tin trimethyl phenoxide; decamethylstannobutane, A., 1188.

Kraus, C. A. See also Reynolds, H. H. Kraus, O. See Gossner, B.

Krause, A., transformation of hydrated ortho-ferric oxide into hydrated meta-ferric oxide, A., 29.

peptisation of ignited ferric oxides and formation of a ferric oxide mirror, A., 644.

Krause, E., marked action of organic compounds of lead on experimental carcinoma in mice, A., 351.

lead tetramethyl and the application of magnesium alkyl chlorides in the preparation of organometallic compounds, A., 1050.

Krause, E., and Renwanz, G., metallic derivatives of thiophen. II. Thallium, silicon, bismuth, tellurium, and mixed tin and lead thienyls, A., 1092.

Krause, E., and Weinberg, K., aromatic tin compounds of higher mol. wt., A., 1322. Krause, G. A., method and apparatus for sterilisation, (P.), B., 304.

sterilisation of water and other liquids, (P.), B., 540.

Krause, O., [with Leroux, A.], ceramic magnesium silicates; sintering process and the constitution of ceramic masses. II., B., 918.

Krause, W., and Sauerwald, F., density measurements at high temperatures. IX. Densities of molten gold, gold-silver, and silver-copper alloys, A., 993.

Krause, W., and Sauerwald, F. [with Michalke, M.], surface tension of fused metals and alloys. III. Gold, zinc, goldcopper, silver-copper, and iron alloys, A., 1001.

Krausewerk, Akt.-Ges., mixing colours with varnish, oil, etc., (P.), B., 863.

Krauskopf, F. C. See Caldwell, W. E.

Krauss, C. See Grasselli Dyestuff Corporation.

Krauss, F., and Bruchhaus, E., "activated form" of oxalic acid, A., 541.

Krauss, F., Fricke, A., and Querengässer, H., double sulphates and their components. V. Aluminium and chromium alums, A., 983.

Krauss, F., and Heidlberg, T. von, mixed halogen complexes of tervalent iron, A., 664.

Krauss, F., Querengässer, H., and Weyer, P., double sulphates and their components. III. Chromic sulphate, A., 663.

Krauss, F., and Schrader, G., oxides of ruthenium and osmium, A., 23.

Krauss, F., and Umbaeh, H., cyanogen compounds of the platinum metals. V. Cyanides and thiocyanates of rhodium, A., 665. double sulphates and their components. IV. Rhodium sulphate and its hydrates, A., 665.

double sulphates and their components. VI. Rhodium double sulphates and their hydrates, A., 1156.

Krauss, F. G., composition of pineapple plants, A., 961.

Krauss, H. E., red marls of the Trias formation, A., 905.

Krauss, L. See Stollé, R. Kraut, H., and Bumm, E., glycolytic power of various organs and its dependence on co-enzyme content, A., 1338.

Kraut, H., Lobinger, K., and Pollitzer, F., apparatus for the distillation of sensitive solutions in a vacuum, A., 1261.

Kraut, H. See also Willstätter, R.

Kravkov, S. P. See Symakov, V. N.

Kravtschinski, B., action of exercise and work on alkali reserve of blood, A., 211.

action of intravenous injection of lactic acid on alkali reserve of blood, A., 214.

Krčma, A. See Löw, A. Krebs, H. A., action of carbon monoxide on hæmatin catalysis, A., 336.

action of carbon monoxide and hydrogen cyanide on catalysis by hæmatin, A., 405.

action of heavy metals on the autoxidation of alkali sulphides and of hydrogen sulphide, A., 406.

inhibition by hydrogen sulphide of catalysis by hæmatin, A., 1094.

Krebs, H. A., and Donegan, J. F., manometric measurement of peptide hydrolysis, A., 1114.

Krech, R. See Grasselli Dyestuff Corporation.

Krefft, O. T. See Fredenhagen, K. Kreidl, I., opacifying substance for adding to enamelling compositions, (P.), B., 357.

clouding of enamels, (P.), B., 979.

Kreielsheimer, K., determination of magnetic permeability of iron wires at high frequency by means of Wheatstone's bridge,

Kreill, H., protection of wood and metal from corrosive influences, (P.), B., 520.

Kreiner, F. Seo Müller, Robert.

Kreis, H., colour reactions of sesamin, B., 622.

Kreis, W., and Chemische Fabrik vorm. Sandoz, extracting the cardio-active substance of Bulbus scillæ, (P.), B., 871\*

Kreitmair, H., iodine content and action of the thyroid gland; biological method for evaluation of thyroid preparations, A., 103.

does l-ephedrine act more powerfully than dl-ephedrine (ephetonine)? A., 1196.

Krekels, R. See Bouckaert, J. P.

Kremann, R. [with Korth, B., Schwarz, E. I., and Pivetz, W.], electrolysis of molten ternary alloys, A., 1402.

Kremers, H. C., and Quill, L. L., rare earths. XXXII. Fractional hydrolysis of raro earths by electrolysis, A., 901.

Kremers, K. See Ruer, R. Kremp, F. See I. G. Farbenind. A.-G.

Krems, A., ground waters in Balakhani, A., 1162.

Krenkel, E., iron ores of South Africa, A., 289.
Krenn, J., electrical conductivity of milk. I. Detection of abnormal milk from diseased cows, B., 574.

determination of f. p. of milk, B., 795. Krenner, J., [rhomboelase, szomolnokite, and berthierite], A., 289.

Křepelka, H., at. wt. of arsenic, A., 863. Křepelka, H., and Toul, F., dissolution of silver in water, A., 501.

Křepelka, J., and Kalina, A., nephelometric determination of barium sulphate, A., 163.

Kress, C. B., granulation of flour and its relation to baking quality, B., 760.

Kreth, W. See Möller, W.

Kretov, A. E., compounds of the higher oxy-acids of the halogens with benzidine, A., 309.

purity of sulphur monochloride, B., 812.

Kretzsohmar, W. See Menzel, H. Krenlen, D. J. W., causes of oxidation of coal, B., 5.

average quantitative composition of Ruhr coal ash, B., 81. humio acids; pyrohymatomelanic acid, B., 232.

reactivity of coke, B., 741, 742.

influence of particle size of sand used in determining coking power of coal on the figures obtained, B., 914.

low-temperature carbonisation of a coal in the presence and absence of tetrahydronaphthalene, B., 966.

determination of the oxidisability of bituminous coals by dilute potassium permanganate solution, B., 1002.

Kreulen, D. J. W., and Ongkiehong, B. L., combined water content of coals of different ages, B., 762.

Kreutzer, C. See Oberhoffer, P.

Kreybig, L. von, changes in the solubility of the phosphoric acid of soils in different biological conditions, B., 787.

Kreyzi, R. See Boresch, K. Krička, J. See Stoklasa, J.

Krikorian, V. H. See Kerr, S. E.

Krings, W., formation of associated or additive compounds in the crystalline state, A., 983.

addition of ammonia to lead nitrate and lead sulphate, A., 1026.

Krings, W., and Kempkens, J., solubility of oxygen in solid iron, A., 1230.

Kringstad, H. See Hassel, O.

Krishna, B. H. R., and Sreenivasaya, M., determination of pyruvic acid, A., 677.

Krishna, R. See Krishna, S.

Krishna, S., and Krishna, R., synthesis of 4:4'-dithiolarsenobenzene, A., 1320.

Krishnamurthy, P., new synthetic resins from aromatic hydrocarbons, (P.), B., 256.

Krishnamurti, K., scattering of light in colloidal solutions and gels. I. Agar sol and gel, A., 260.

mechanism of the swelling of gels, A., 264.

scattering of light in colloidal solutions and gels, A., 1379. Krishnamurti, P., diffraction of X-rays by aqueous solutions of sucrose, lævulose, and dextrose, A., 236.

X-ray diffraction of crystal powders and liquids in relation to their constitution, A., 246.

use of zirconium tetrachloride in organic synthesis, A., 316. nature of dextrin, gelatin, and sodium oleate solutions as revealed by X-ray diffraction, A., 751.

X-ray diffraction in liquid mixtures, A., 751.

X-ray diffraction in liquids and solutions and the molecular structure factor, A., 989.

X-ray diffraction by amorphous solids, A., 1220.

Krishnamurti, P. See also Raman, C. V. Krishnan, K. S., Raman effect on X-ray scattering, A., 120. Raman spectra of crystals, A., 1216.

rishnan,  $\hat{K}$ . S., and Rao, S. R., anisotropy of the polarisation field in liquids, A., 1129.

Krishnan,  $\bar{K}$ . S. See also Raman, C. V.

Krishnaswami, K. R., preparation of tantalum pentabromide, A., 40. atomic weight of antimony from different sources, A., 115.

Kristensson, A. See Kali-Ind. A.-G. Krivonos, F. F. See Krasuski, K. A.

Kriz, S., dimensions, working conditions, and efficiency of German electric steel furnaces, B., 397.

Křiženecký, J., vitamins and light. I. Relation between rickets, ultra-violet light, and the Russell effect (photoactivity) with various substances, particularly lipins, A., 1344.

Kroebel, W., origin of long infra-red radiation of mercury, A., 1119. Kröger, C., limits of reactivity of the magnesium-cadmium alloys, and their potential-concentration curves, A., 501.

Kröger, M., and Fischer, K. (Leipsig), elastic properties of acid and alkaline silicic acid and their inner structure, A., 262. gel pseudomorphs, A., 263.

plastic properties of gels, their dependence on temperature, and the formation of gelatinous lenses, A., 264.

Kröger, M., and Yao, W. N., expansion and contraction of india-rubber laminæ, the critical "slipping" temperature (Gleit-temperatur) and its displacement by additions, A., 881.

Kröger, M. See also Le Blanc, M. Kröhnke, F. See Leuchs, H.

Krömer, E., Zeeman effect and term arrangement in the spectrum of singly-ionised chromium, A., 227.

Kroemer, K., and Krumbholz, growth and fermentative power of wine yeasts at low temperatures, A., 849.

Kroepelin, H., lyophilic colloids. I. Osmotic experiments and

viscosity measurements with caoutchouc solutions, A., 644.

Kroepelin, H., and Brumshagen, W., osmotic experiments with caoutchouc solutions, A., 71.

Kröper, H. See Braun, J. von.

Krogh, A., and Rehberg, P. B., micro-determination of carbon dioxide in air, A., 614.

Krogh,  $A.\ T$ . See Westinghouse Electric & Manuf. Co. Krohs, W. See I. G. Farbenind. A.-G.

Królikowski, L., determination of the degree of humification of forest litter, B., 570.

Kroll, G. J., production of alloys of lead with alkaline-earth metals, (P.), B., 440\*.

Kroll, W., alloys of beryllium with iron, B., 723.

 Krombach, H. See Cornec, E.
 Kronberg, N. M., producing a milk-serum preparation for the improvement of bread, cakes, and biscuits and as an aid in the baking thereof, (P.), B., 338, 834\*.

Kronig, R. de L., theory of electrical rectification, A., 385. quantum theory of dispersion in metallic conductors, A., 871.

Kropacsy, S. See Janke, A. Kropf, H. See Geiger, E.

Kropp, W., and Winthrop Chemical Co., Inc., solution of hypnotics and sedatives and solvents therefor, (P.), B., 698.

Krotkov, V. See McLennan, J. C. Krügel, C. See Dreyspring, C. Krueger, A. C. See Hahlenberg, L.

Krüger, D., diffusion experiments with sugar-protein solutions, A., 1003.

Krüger, D., and Tschirch, E., microchemical detection of acetic acid as sodium uranyl acetate, B., 844.

Krüger, D. See also Freundlich, H., and Herzog, R. O.

Krüger, F., and Ball, A., external photo-electric effects of silver halides and silver sulphide, A., 861.

Krüger, F., and Maske, F., dielectric constants of some metallic vapours, A., 742.

Krüger, F. von, catalase number and index of blood of newly-

born kittens, A., 207. influence of simultaneous hunger and thirst on the catalase number and index of blood, A., 207.

Krüger, R. See Liu, S. K. Krueger, R. H., and Engalhard, Inc., C., gas-analysis apparatus,

(P.), B., 229.

Krug, E. See Gebauer-Fülnegg, E.

Krugh, H. M. See Menten, M. L.

Kruglov, A. See Salkind, J. Kruisheer, C. I., determination of levulose in urine, A., 716. determination of starch syrup and dextrose in presence of sucrose and invert sugar, B., 533.

determination of honey in honey cake, B., 698. Krumbholz, and Soos, effect of alcohol and sulphur dioxide on the fermentability of wine yeasts, A., 849.

Krumbholz, See also Kroemer, K. Krumboltz, O. F. See Spencer, G. C.

Krumholz, P. See Feigl, F., and Heller, K. Krumpel, O. See Hausmann, W., and Spiegel-Adolf, M. Krupkina, F. A. See Ivanov, N. N.

Krupkowski, A., nickel-copper alloys, B., 477.

Krupp Akt.-Ges., F., increasing the yield point in hollow bodies from steel alloys, particularly austenitic steel alloys, (P.), B., 23.

hardening the marginal layers of cast iron alloys, (P.), B., 133. heat-treatment of [alloy] steel, (P.), B., 249.

centrifugal separator drums, (P.), B., 459.

iron-nickel alloy, (P.), B., 561. Krupp Akt.-Ges., F. See also Fry, A., and Houdremont, E. Krupp Akt.-Ges. Friedrich-Alfred-Hütte, F., and Bansen, H., chequer work, particularly intended for heat accumulators, (P.), B., 305.

Krupp Grusonwerk Akt.-Ges., F., wet grinding of materials in tube or ball mills, (P.), B., 78.

tubular grinding mills, (P.), B., 452.

recovery of volatilisable metals [zinc] from iron-containing materials, (P.), B., 561.

carrying out endothermic chemical reactions of various kinds, (P.), B., 838.

froth-flotation processes, (P.), B., 984.

separation of materials of different physical qualities, especially of raw mining products, (P.), B., 1020.

Krupp Grusonwerk Akt.-Ges., F. See also Johannsen, F., Matzel, C., and Ullrich, G.

Kruse, P. See Bliss Co., E. W.

Kruta, E. See Späth, E.

Kruyt, H. R., unity in the theory of colloids, A., 263.

lyophilic colloids. V., A., 1381.

orientation of molecules in the adsorption layer and heterogeneous catalysis, A., 1399.

Kruyt, H. R., and Briggs, D. R., cataphoretic measurements and

the theory of the critical potential, A., 879. Kruyt, H. R., and De Jong, H. G. B., lyophilic colloids. I. Agar, A., 136.

Kruyt, H. R., and De Kadt, G. S., [electric] charge of carbon, A.,

Kruyt, H. R., and Lier, H., lyophilic colloids. II. Casein sol, A., 761.

Kruyt, H. R., and Tendeloo, H. J. C., lyophilic colloids. III.

Gum arabic sol, A., 1381. lyophilic colloids. IV. Charge hydration, and particle-size in

sols of starch, gum arabic, gelatin, and casein, A., 1381. Kruyt, H. R., and Willigen, P. C. van der, electrical double layer

of colloids; silver iodide sol, A., 136.

Krym, V. S., and Pantschenko, S. J., reducing action of various coals in an aqueous medium, B., 382.

Krynitsky,  $A.\ I.$  See Harrison,  $W.\ N.$  Krynski, B. See Konarzewski, J.

Krzikalla, H. See Grasselli Dyestuff Corp., and I. G. Farbenind. A.-G.

Ksanda, C. J. See Roberts, H. S.

Ksendsowsky, M. See Schazillo, B. Kubasowa, W. See Schlesinger, N. Kubelka, P., more general formulation of the phase rule,  $\Lambda$ .,

Kubelka, V., analysis of artificial bating materials [for leather], B., 140.

Kubelka, V., and Nemec, V., qualitative analysis of [vegetable] tanning materials by means of ultra-violet rays, B., 614. [qualitative] analysis of [vegetable] tanning materials by

luminescence, B., 865.

sedimentation method of determining the insoluble matter in tannin analysis, B., 991.

Kubelka, V., and Wagner, Joachim, analysis of artificial bating materials [for leather]. II., B., 755. action of neutral salts on the enzyme activity of tryptic bates.

I., B., 1025.

Kubelka, V., Wagner, Joachim, and Zuravlev, S., determination of the iodine value [of oils]. I., II., and III., B., 218, 924.

iodine values; report of Committee of Society of Leather Trades' Chemists on oils and fats. IV., B., 1022.

Kubelkova, O. See Knop, J.

Kubina, H., volumetric determination of arsine, A., 163.

action of hydrazine on quinquevalent arsenic in weakly acid solution. II., A., 1026.

Kubo, T., d-lactic acid in gastric juice [in cancer], A., 1481. Kubota, S., Nakashima, S., and Ito, R., lobeline-like substance

isolated from the roots of Lobelia scssilifolia, L., A., 961.

Kubowitz, F., metabolism of the retina of the frog and determination of Meyerhof quotients at different temperatures, A.,

Kubowitz, F. See also Warburg, O. Kucenos, V. D. See Krasuski, K. A.

Kucera, C., distribution of vitamins-B and -C in young plants, A., 1203.

diminution of the vitamin-B content of cereals and legumes during germination, A., 1344.

differences in vitamin-B and -C content of cereal grains during germination, A., 1344.

Kuchler, K. See Bennewitz, K.

Kuczkowski, S., absorption and secretion in the small intestine. Secretion of electrolytes, A., 839.

Kuczyński, T., certain phenomena in electric and magnetic fields, A., 1006.

Kudar, J., quantum mechanics and radioactivity. II., A., 485. foundation of Nernst's hypothesis of formation of radioactive elements on the basis of wave-mechanics, A., 621.

quantum mechanics of radioactive change, A., 736.

wave-mechanical character of the β-ray change, A., 1210. quantum mechanical problem of ionisation in the Stark effect, A., 1354.

wave-mechanical condition for the stability of the atomic nucleus, A., 1360.

Kudrin, S. A., growth and nutrient intake of the cotton plant, B., 336.

Kudrjavzeva, A. See Ivanov, N. N., and Palladin, A. Kübler, H. See Pfeiffer, P.

Küchenmeister, H. J., selenium and like cells, (P.), B., 783.

Küchlin, A.T., and Böeseken, J., mechanism of oxidation of some carbohydrates and polyhydric alcohols by hydrogen peroxide with iron salts as catalyst in acid media, A., 50.

Kühl, G. W., quantitative separation of nickel and calcium, A., 532.

Kühl, H. See Mohs, K.

Kühn, A., detection of veronal in urine, A., 1335.

Kühn, E., determination of the sp. gr. of refractory materials, B., 246.

Kühn, O. See Wintgen, R.

Kühn, S., acidimetric titration of silica and aluminium with an extension of the theory of acidimetric titrations, B., 571. Kühnelt, W., histochemistry of the insect skeleton, A., 342.

Küng, A., and Seger, E., strength of cellulose [pulp], B., 675. measurement of the viscosity of celluloses, B., 713.

Küntzel, A., swelling of gelatin in aqueous solutions of acids, bases, and salts, and in mixtures of these, A., 1143. double refraction of tanned collagen fibres, B., 567.

Kuentzel, W. E., improved stopcock for gas analysis burettes, A., 1261.

Küster, A. See Fries, K.

Küster, W., and Grosse, Arno, addition of bromine to proto-porphyrin dimethyl ester and to its complex zinc salt, A., 198. Küster, W., and Irion, W., hydrolysis of wool by sodium sulphide. II., B., 937.

Küster, IV., and Umbrecht, J., sodium and potassium content of lentils and peas, A., 105.

Küttel, K., Watzl, E. J., and Trenkamp, H. J., production of metal glutins, (P.), B., 535.

Kuttner, C. W. See Gregg, J. L.

Küttner, Akt.-Ges., F., apparatus for washing, bleaching, and dycing artificial silk in hanks or spinning cakes, (P.), B., 243. Kufferath, A., activated sludge process, B., 418.

Kuffner, F. See Spath, E. Kugel, E. See Zeche de Wendel.

Kugel, M. A., hypnotics and diuresis; water and salt excretion in sleep with and without pituitrin, A., 1104.

Kugelmass, I. N., determination of the tertiary dissociation constant of phosphoric acid, A., 1236. Kuhbier, F. See Traube, W. Kuheliev, K. See Stranski, I. N.

Kuhlwein, F. L. See Chem. Fabr. in Billwarder, and Stach, E. Kuhn, A., syneresis, A., 137, 763.

Kuhn, C., bile pigments in urine, A., 343.

Kuhn, G., determination of paraffin hydrocarbons in motor fuels by sulphonation, B., 879.

Kuhn, G. Soo also Schellenberg, H.

Kuhn, R., stereochemistry of aromatic compounds. IX. Tetraphenylene and the mobility of benzene rings, A., 1435.

Kuhn, R., and Ehmann, L., conjugated unsaturated compounds. XI. Bixin and its degradation to bixane, A., 1456.

Kuhn, R., and Goldfinger, P., stereochemistry of aromatic com-

pounds. VIII. Optically active heterocyclic compounds and azo-dyes of the dinaphthyl series, A., 804.
Kuhn, R., and Levy, E., so-called "fluoreneoxalic ester," A., 66.

Kuhn, R., and Meyer, Karl, autoxidation of benzaldehyde, A., 152.

Kuhn, R., and Seyffert, C., catalytic hydrogenation of hæmins and porphyrins, A., 198.

Kuhn, R., and Suginomé, H., tetramethylmargaric acid and tetramethylstearic acid, A., 1424.

Kuhn, R., and Wagner-Jauregg, T., comparison of natural and synthetic cyanidin, A., 192.

autoracomisation, A., 425. Kuhn, R., and Wiegand, W., conjugated unsaturated compounds. IX. Colouring matter from alkekongi (Physalis alkekengi and

P. franchetti), A., 823.

Kuhn, R., and Winterstein, A., conjugated unsaturated compounds. VIII., A., 699.

conjugated unsaturated compounds. X. The ethylene group as chromophoro, A., 1456.

Kuhn, R., Winterstein, A., and Karlovitz, L., conjugated unsaturated compounds. VII. Determination of side-chain [methyl groups] in bixin and crocetin, A., 425.

Kuhn, R. See also Willstätter, R. Kuhn, W., transference of energy in collisions between nuclei, Á., 234, 486.

energy changes in nuclear collisions, A., 737.

natural optical activity, A., 981.

measurement of optical activity in the extreme ultra-violet, A., 981.

Kuhn, W., and Braun, E., photochemical production of optically active substance, A., 522.

Kuhnert, rôle of nitrogen fertilisers in the treatment of fish-ponds with artificial manures, B., 448.

Kuhnert, W. A., recovery of sodium salts [carbonates] from brines [containing them], (P.), B., 128.

Kulpers, J. P. Seo Nellensteyn, F. J. Kukharenko, I. A., and Savinov, B. G., determination of hydrogenion concentration; application in sugar manufacture, B., 655. Kuklin, E. V., saturated solutions of salts having one common ion, A., 1013.

Kulas, C., manufacture of plastic and mouldable composition, (P.), B., 531.

Kulenkampff, H., continuous X-radiation from thin aluminium foil, A., 14.

diamagnetism of ions of the rare gas type, A., 230.

absorption law for the penetrating height-radiation, A., 1210.

Kulenkampff, H., and Woernle, B., ionisation spectrometer for long-wave X-rays, A., 1220. Kulev, A. A. Sce Voroshcov, N. N.

Kulikov, V., biochemical production of fats, A., 220. biochemical preparation of fats, A., 1108.

Kulikov, V., and Bobkova, M., thermostability and regeneration of inactivated enzymes, A., 606.

Kulikov, V., Smirnov, P., and Bobkova, M., physico-chemical conditions of the thermostability of diphtheria antitoxin, A.,

Kullgren, C., and Tyden, H., determination of pentosans, A., 1278. Kulman, A., apparatus for extraction with filtration, A., 785. Kulman, J., test for bleaching of flour, B., 954.

Kultjugin, A., and Savostjanov, G., changes in activity of bloodeatalase, A., 1325.

Kulzinski, M., distillation of solid fuels, (P.), B., 44.

Kumagai, T., Kawai, S., Shikinami, Y., and Hosono, T., substances producing hypoglycæmia. I. Syntheses of guanidine derivatives, A., 468.

Kumagawa, H., and Shimomura, K., preparing and separating the cellulose material, suitable for paper-manufacturing, from plant raw material with pith fibro, (P.), B., 13.

Kummer, U. von. See Meisenheimer, J., and Reihlen, H.

Kunise, I. See Isobe, H. Kunitz, M., syneresis and swelling of gelatin, A., 138.

Kunitz, M., and Northrop, J. H., fractionation of gelatin, A., 458. Kunitz, M. Sce also Northrop, J. H. Kunitz, W., isomorphous series in the tourmaline group and the

genetic relationships between tourmaline and the micas, A., 905.

Kunsman, C. H., thermal decomposition of ammonia on iron catalysts. II., A., 520.

relative activation of a nitrogen-hydrogen mixture by electrons and by K+ ions in the formation of ammonia, A., 1246.

Kunstdünger Patent Verwertungs Akt.-Ges., and Liljenroth,  $F.\ G.$ , producing a mixture of calcium nitrate and ammonium nitrate, (P.), B., 171, 471.

leaching of raw phosphate, (P.), B., 681.

leaching of solid raw materials [phosphates] with acid solutions, (P.), B., 718.

Kunstharzfabrik F. Pollak Ges.m.b.H., production of condensation products from phenols and aldehydes, (P.), B., 404.

Kunz, A. H. See Popov, S.

Kunz, J., diagram of the physical properties of crystals, A., 986. anomalous Zeeman effect, Stern and Gerlach's experiment, and the magneton, A., 1208.

Kunze, H. See Kirpal, A. Kunze, R. Sco Halden, W. Kunzer, W. See Schwarz, R.

Kunz-Krause, H., valerian root and the formation of sucrose, A., 106.

Kunz-Krause, H., and Manicke, P., elimination of carbon dioxide from organic compounds. VII. Pyrogenic degradation of cyclic hydroxy-acids; salicylic, protocatechnic, gallic, o-hydroxycinnamic, 3:4-dihydroxycinnamic, and cyclogallipharic acids and their derivatives alone and in presence of phloroglucinol, aniline, and pyridine, A., 1295.

Kupinskaja,  $G.\ W.\ See\ Rodionov,\ W.\ M.\ Kuraš,\ M.\ See\ Dubský,\ J.\ V.\ Kurath,\ F.\ See\ Cherry,\ O.\ A.$ 

Kurdjumov, G., X-ray investigation of the structure of annealed

carbon steel, A., 986.

Kurdjumov, G., and Kaminsky, E., X-ray investigation of the structure of hardened carbon steels, A., 494.

Kurek, E., isolation of gases [ozone and nitrogen], (P.), B., 682. Kurilsky, R. See Rathery, F.

Kurishita, bile pigment content in local hamorrhage in man, A.,

Kurita, T. See Suzuki, T.

Kurnakov, N. S., and Černych, V., hydrotalcite and pyroaurite,

heating curves of manganite, A., 787.

Kurnakov, N. S. See also Ageev, N. V. Kuroda, (Miss) C., constitution of carthamin. I. and II., A., 430,

constitution of carthamidin. III., A., 703. Kuroda, M., studies on sherardising, B., 211.

Kurotschkina, N. V. See Ivanov, S. Kurth, E. F. See Sherrard, E. C. Kurtz, F. See Lang, R.

Kusama, T., catalytic oxidation of naphthalene, B., 88.

Kusama, T., and Uno, Y., nickel catalyst. I. Catalyst prepared from nickel chloride, A., 890.

thermal decomposition of methane, B., 193.

Kusch, M., apparatus for purifying waste water with quickened

Kusner, M., apparatus for pulliying waste water with quickened sludge, (P.), B., 540.
Kusner, T. S., action of piperazine on isosafrole oxide, A., 1080.
Kusnetzov, A. I. See Anitschkov, S. V.
Kusnetzov, V. I. clarifying diffusion juice with magnesium sulphate, B., 655.
Kuss, E. See Mittasch, A.
Kusnerzov, A. I. Magnetisation survey of

Kussmann, A., monel metal. II. Magnetisation curves of monel metal, A., 126.

Kussmann, A., and Scharnow, B., theory of Heusler alloys, A., 385. hardness and magnetic properties of iron-copper alloys and their relation to the equilibrium, A., 388.

cocreive power. I. Coercive power and mechanical hardness,

A., 633.

coercivity and mechanical hardness, A., 752.

Kussmaul, W. See Stoll, A.

Kuster, W., and Degenfeld, W. von, porphyrins. XVIII. Porphyrin formation from β-hæmin, A., 455.

Kuster, W., and Schlayer, K., porphyrins. XIX. Porphyrin fission of substituted hæmins and constitution of hæmin, A.,

Kusui, K., cholesterol metabolism in the incubated egg, A., 596.

Kúthy, A. See Verzár, F.

Kutscher, F. See Flössner, O.

Kutscherenko, N. A. See Roginski, S. Z.

Kutschinsky, P. A., comparison of methods for determining the saturation capacity of soils, B., 183.

Kutsunai, Y., mathematical interpretation of experimental results obtained with fertilisers for sugar cane, B., 106.

Kutter, F., brewers' pitch [for lining casks], B., 34, 1028. Kuttner, F. See Wagner, Albert. Kutzenos, V. D., use of kerosene for determination of the nicotine content in tobacco, B., 996.

Kutzev, S. S., limit of sugar extraction from cossettes in the diffusion process, B., 655.

Kutzlnigg,  $\hat{A}$ ., colloidal potassium ferrocyanide solutions, A., 504. specific colour reaction for isobutyl alcohol, A., 948.

Kutzlnigg, A. See also Beutel, E. Kuwata, T., naphthenic acids. VIII. Polymethylene rings of naphthenic acids in Japanese petroleum. IX. Constitution of octanaphthenic acid from Nishiyama petroleum, A., 184.

Kuwata, T. See also Tanaka, Y. Kuyk, F. A. J. van. See Jagt, B. G. H. van der.

Kuypers, P. M. See Iterson, F. K. T. van.
Kuzmin, V. A., essential oils of peppermint from Poltava Government, B., 660.

Kvalnes, H. M. See Hogness, T. R. Kvapil, K. See Němec, A.

Kwieciński, L., and Marchlewski, L., absorption of ultra-violet light by the inversion products of sucrose, A., 9, 238\*. absorption of ultra-violet light by the glucosans, A., 9.

absorption of ultra-violet light by arabinose, maltose, sucrose, raffinose, and by mannitol and dulcitol, A., 9.

absorption of ultra-violet light by benzene, A., 1213.

absorption of ultra-violet light by organic substances. X., A., 1213.

Kyber, W., production of phosphorus and fusion cement from

natural phosphates, (P.), B., 815\*.

Kyrides, L. P., and National Aniline & Chemical Co., Inc., [pre-paration of] alkali alcoholates [alkoxides], (P.), B., 887. Kyropulos, S., viscosity and flow-orientation, A., 253.

physical properties and constitution of mineral lubricating oils, B., 931.

L.

L.T.N. Manufacturing & Development System. See Newitt, F. T.

Laar, J. J. van, dependence of surface tension and of heat of evaporation on density and temperature up to the critical temperature, A., 641.

reaction velocities, A., 1394.

Lass, F. See Ruff, O., and Tammann, G.

Labanukrom, T., chemistry of crystalline forms of aggregation; basic copper compounds, A., 878.

Labbé, M., Nepveux, F., and Hejda, ammonia content of normal and of pathological human blood, A., 594.

Labbé, M., Nepveux, F., and Hiernaux, A., [scrum-]nitrogen coefficient in the normal state, A., 1095.

Labes, R., pharmacological significance of reactions between arsenious acid and thiol compounds, A., 720.

Laboratoire de Persectionnements Thermiques, and Couturaud, P. E. J. J., production of walls, furnaces, and installations formed of refractory materials resistant to destructive effects, (P.), B., 683.

preventing formation of deposits on heat-exchange apparatus exposed to hot gases, (P.), B., 701.

Laboratorium "Tasch" Akt.-Ges. See "Tasch" Lab., Ltd.

La Burthe, P. H. C., and Quartz & Silice, manufacture of silica glass articles, (P.), B., 816\*.

Laby, T. H. See Eddy, C. E.

Lacassagne, A., action of X-rays of long wave-length on microorganisms; statistics of the mortality of the irradiated bacteria, A., 356.

La Cauza, G., concentration of juices, vegetable extracts, and organic and inorganic solutions generally, (P.), B., 801.

Lacey, H. T. Sce Houseman, P. A.

Lachman, A., and Richfield Oil Co. of California, refining of mineral oils, (P.), B., 745, 885. Lacoss, D. A. See Doughty, H. W.

Lacourt, A., synthesis of methyl ketones from p-tert.-butyltoluene and p-cymene by the Friedel-Crafts reaction, A., 447.

Lacroix, A., chemical composition of the tectites, and in particular of those of Cambodia, A., 288.

Lacroix, H., effect of growth-promoting substances of the character of vitamin-D on the yeast cell, A., 1112.

Lacroix, M., and Breyer, H., insecticide and fungicide, (P.), B.,

Lacroute, P., spark spectrum of sulphur, S II, in the Schumann region, A., 112. Lacrue, M. T., synthesis of camphor; purity of isobornyl acetate,

B., 956.

Ladenburg, R., experimental test of the quantum theoretical dispersion formula. II., A., 744. Stark effect of higher atoms and its interpretation in terms of

the quantum theory, A., 972.

Ladenburg, R., and Minkowski, R., duration of excited sodium atoms as deduced from the brightness of sodium flames and the degree of dissociation of sodium salts in flame, A., 6.

Ladenburg, R. See also Kopfermann, H., and Metallbank & Metallurgische Ges. A.-G.

Lämmlein, G. See Schubnikov, A. V.

Läuchli, A., absorption of ultra-violet radiation by ozone, A.,

Läuger, P., and Geigy Société Anonyme, J. R., manufacture of alkylisorosindulinesulphonie acids, (P.), B., 317\*.

Lafeuille, F., tubular rotary crystallisers or crystalliser-boilers, (P.), B., 499.

Laffitte, P., physical chemistry of "knock" and "anti-knocks," A., 1395.

Laffitte, P. See also Prettre, M.

La Fibre Diamond, production of synthetic resins, (P.), B., 586. Latont, L. A. See "Intra."

Laforce. See Fonzes-Diacon.

La Forge, F. B., and Smith, L. E., rotenone. I. Reduction products, A., 1181.

Lagrange, E., coagulation of hen's egg-white by biological agents, A., 589.

La Grutta, L., influence of ethyl alcohol on the excretion of purinc substances, A., 96.

Lahousse, J. E. G., [impregnating paper] insulating material for electrical condensers, (P.), B., 362.

Lahousse, L. E. G., and Société pour la Fabrication de la Soie "Rhodiaseta," apparatus for manufacture of artificial silk, (P.), B., 92\*.

Laillet, C., and Giustiniani, J., hydrogenation of products containing phenol, benzene, or naphtha, (P.), B., 200.

Laing, B., and Nielsen, H., distillation and utilisation of carbonaceous materials, and manufacture of coke, briquettes, and solid fuel compositions, (P.), B., 384.

Laing, B. See also Brand, J. J. C., and Nielsen, H. Laing, L., mixer, (P.), B., 702.
Laing, M. E., McBain, J. W., and Harrison, E. W., adsorption of sodium oleate at the air-water interface, A., 1141.

Laing, M. E. See also McBain, J. W.

L'Air Liquide Société Anonyme pour l'Étude et l'Exploit. des Procedes G. Claude, liquefying and separating the constituents of gaseous mixtures at low temperatures, (P.), B., 557. [oscillation damper for] manometers and the like, (P.), B.,

treatment of [removal of traces of oxides of nitrogen from] gaseous mixtures containing hydrogen, (P.), B., 682.

pumps for forcing under pressure liquefied gases at low temperatures, (P.), B., 762.

analysis of gaseous mixtures, (P.), B., 839.

L'Air Liquide Société Anonyme pour l'Étude et l'Exploit. des Procedes G. Claude, and Larson, A. T., carrying out exothermio catalytic chemical reactions under pressure, (P.), B., 496.

L'Air Liquide Société Anonyme pour l'Étude et l'Exploit. des Procédés G. Claude, and Société Chimique de la Grande Paroisse (Azote et Prod. Chim.), carrying out exothermic chemical reactions under pressure and at a high temperature, (P.), B., 702. purification of gases, (P.), B., 978.

L'Air Liquide Société Anonyme pour l'Étude et l'Exploit. des Procedes G. Claude, and Urbain, E., manufacture of fertilisers, (P.), B., 993.

L'Air Liquide Société Anonyme pour l'Étude et l'Exploit. des Procédés G. Claude. Sec also Claude, G.

Laird, E. R. See Henderson, J. E. Laird, H. R., effect of hydrogen on the thermionic omission from

potassium, A., 1121. Laist, F., and Frick, F. F., anode for electrolysis of copper solutions, (P.), B., 217.

Lakeman, C., and Groosmuller, J. T., microscopic images, A., 491. Lakewest Corporation, manufacture of [fibrous] plastic material [for bottle caps, eto.], (P.), B., 243.

Lakhovsky, G., sterilisation of water and other liquids by the

application of electrical potentials, B., 578.

Lakra, H., and Dains, F. B., action of phenylcarbimide on urethanes, carbamides, and thiocarbamides, A., 1055.

Lal, M. M. See Lander, P. E.

Lal, P., and Ganguly, P. B., effect of ultra-violet light on colloids, A., 1235.

Lallemand, S., cellular toxicity of gaseous and volatile poisons, A., 721.

Lamb, A., boilers and like apparatus for evaporation or heating of

liquids, (P.), B., 1000. Lamb, B. A. See Hemmings, F. C. Lamb, F. W. See Israëls, M. C. G.

Lamb, M. C. See Hemmings, F. C.

Lambert, B., and Clark, A. M., gas-solid equilibria. II. Pressureconcentration equilibria between benzene and (a) ferric oxide gel, (b) silica gel, directly determined under isothermal conditions, A., 389

Lambert, B., and National Processes, Ltd., manufacture of materials of the nature of catalysts for the oxidation of oxidisable gases in admixture with air or oxygen, (P.), B., 94.

Lambert, B. See also Robson, S.

Lambert, P., and Lecomte, J., infra-red registering spectrometer, A., 975.

Lambert, R. H. See Nietz, A. H., and Sheppard, S. E.

Lambert, W. See Stone & Co., Ltd., J.

Lambie, C. G., Kermack, W. O., and Harvey, W. F., effect of parathyroid hormone on the structure of bone, A., 475.

Lambie, C. G., and Redhead, F. A., carbohydrate metabolism. VI. Antagonistic action of pituitrin and adrenaline on carbohydrate metabolism with special reference to gaseous exchange, inorganic blood-phosphate, and blood-sugar, A., 1201.

Lambie, C. G. Sec also Kermack, W. O.

Lambie, J. M., and Ross, D. W., refractory, (P.), B., 558.

Lambie, J. M. Sce also Ross, D. W.

Lamble, A. See Moore, J. W. Lambly, J. E., water absorption band at 9727 A., A., 1364.

Lambot, M., reduction of iron ores, (P.), B., 398.

Lambrecth, J. J., treatment of vegetable textile fibres to render them non-putrefiable, (P.), B., 1012.

Lambrey, M., ultra-violet absorption spectrum of nitrogen peroxide, A., 376.

absorption spectrum of nitric oxide, A., 1363. Lambrey, M. See also Chalonge, D.

Lambris, G., swelling of coals. II., B., 270.

La Mer, V. K., and Cook, R. G., activity coefficients of electrolytes. III. Principle of specific interaction in mixtures of high valency electrolytes, A., 1386.

La Mer, V. K., and Goldman, F. H., activity coefficients of electrolytes. VI. Solubilities of lanthanum and thallous iodates in aqueous salt solutions and the principle of specific interaction, A., 1387.

La Mer, V. K., and Temple, J. W., autoxidation of quinol catalysed by manganous salts in acid solutions, A., 657.

Lamie, R. D. Sec Reed, H. S.

Lamm, O., determination of concentration gradients by means of curved light rays; a new method of observation, A., 129. theory and methods of ultracentrifuging, A., 1234.

Lamm, S., manufacture of potassium sulphate and ammonium chloride, (P.), B., 53.

Lammering, D. See Zellmann, R. Lammers, C. N. Sco Potter, T. W.

Lammert, B., production of molecular rays of uniform velocity,

Lammert, F. E., gas purifier, (P.), B., 506. Lamont, D. R. See Industrial Spray-Drying Corp. La Mont, W. D. See La Mont Corp.

La Mont Corporation, La Mont, W. D., and Ernst, A. F., effecting heat exchange, (P.), B., 495.

Lamort, M. J. See Marangoni, E. La Motte, R. G. Sco Mayer, H. H.

Lampe, B., influence of formaldehydo on the germination of steeped grain, B., 69.

determination of the starch value of frozen potatoes, B., 338. composition of fusel oils which have been separated as vapour, B., 619.

comparative results with Arland's potato starch tester and Reimann's potato balance, B., 658

comparative determination of diastatic power by the methods of Lintner and of Windisch and Kolbach, B., 907.

influence of disinfectants on the diastatic power of steeped barloy, B., 1048.

Lampe, B., and Kilp, W., separation of fusel oil from the first distillate, B., 69.

determination of starch in sound and frozen potatoes, B., 575, 733.

Lampe, B. See also Lühder, E. Lampe, W., synthesis of substantive dyes of the dicinnamoylmethane group, A., 1069.

Lampen, A., quality control in the sulphite pulp industry, B., 390\*. Lampert, L. M. See Hoyt, C. F.

Lampitt, L. H., Hughes, E. B., and Rooke, H. S., furfuraldehyde

and diastase in heated honey, B., 697.

Lancaster, H. C., importance of design and setting of large kettles used for refining and low m. p. alloys, B., 287.

Lancaster, J. See Burn, J. F

Landa, S., slow combustion of triacontane, A., 46.

determination of sulphur in organic liquids, A., 1093. slow oxidation of hydrocarbons, B., 88.

Landau, H., symbiosis among lactic acid organisms, A., 1109. Lande, (Mmc.). See Pélabon, H. Lande, J. A. L. van der. See N. V. Noury & van der Lande's

Handelmaatschappij.

Lande, L. M. F. van de. See Wibaut, J. P.

Landecker, M., and American Nnplax Corporation, adhesive and plastic mass and its manufacture, (P.), B., 950.

Landecker, M. See also Homberg,  $\hat{F}$ .

Lander, C. H., and Shaw, J. F., low-temperature carbonisation of bituminous coals, etc., (P.), B., 7. vertical retorts, etc., (P.), B., 8.

Lander, C. H., Sinnatt, F. S., and King, J. G., hydrogenation of coal and like carbonaceous material, (P.), B., 196.

hydrogenation of coal, (P.), B., 346.

Lander, C. H., Sinnatt, F. S., King, J. G., and Crawford, A.,

treatment of coal and like carbonaceous material, (P.), B., 119. Lander, P. E., Narain, R., and Lal, M. M., soils of the Punjab,

Landgraf, F. K. See Flannery Bolt Co. Landgraf, K. E., soil reaction and the growth of meadow plants, B., 487.

Landi, M. See Tocco, L.

Landolt, A., dyeing of tissue paper with acid dyes fast to water,

Landrieu, P., and Bayloeq, F., thermochemical studies in the acetylene series, A., 754.

Landrieu, P., Baylocq, F., and Johnson, J. R., thermochemical study in the furan series, A., 268. Landry, B. A. See Nicholls, P.

Landsberg, G., and Leontovitsch, M., intensity of scattered light, and its dependence on temperature, A., 625.

Landsberg,  $\hat{G}$ , and Mandelstam, L, scattering of light by crystals, A., 9.

scattering of light in crystals at high temperatures, A., 1361. Landsberg, M. See Weil, Rudolf.

Landsteiner, K., and Scheer, J. van der, serological differentiation of steric isomerides, A., 203.

Landsteiner, K. See also Furth, J.

Landt, E., and Bhargava, K. K., adsorptive characters of activated ash-free charcoals, B., 765

Landt, G. E., Adams, W. H., jun., and Continental-Diamond Fibre Co., preparation of synthetic resin varnishes, (P.), B.,

Landucci, Z., and Du Pont-Pathé Film Manufacturing Corporation, manufacture of threads, filaments, bands, or films of a polished and transparent nature, composed of plastic substances, (P.), B., 639.

Landweer, C. See Waser, E.

Lane, A. C., earth's age by sodium accumulation, A., 535.

Lane, C. T., magnetic susceptibility of easium in the solid and liquid state, A., 1225.

Lane, F. H. See Dunlop Rubber Co., Ltd.

Lane, R. E., and Chloride Electrical Storage Co., Ltd., respirators, (P.), B., 494.

Lane, R. S., and Standard Oil Development Co., romoval of wax from hydrocarbon oils, (P.), B., 634.

Lane, S. C. See Davis, T. L. Lane, W. E., treatment of [tanned] leather, (P.), B., 830.

Lang, A. See Felix, K.

Lang, F. R. See Berry, H. R. Lang, H. See I. G. Farbenind. A.-G.

Lang, H. O., removal of [non-vitreous] enamel, (P.), B., 610.

Lang, K. See Hofmann, F. Lang, Konrad, possibility of individual chemical synthesis of blood-proteins. I. Tryptophan content of human serumproteins, 1476.

colorimetric micro-determination of sulphur and of sulphates in biological fluids, A., 1500.

Lang, Konrad. See also Stuber, B.

Lang, M. H., preparation of anti-corrosive compositions, (P.), B.,

Lang, R., and Kurtz, F., volumetric determination of manganese as manganic salt, A., 1032.

Lang, R. J., spectra of doubly-ionised arsenic, antimony, and bismuth, A., 112.

spark spectrum of nickel (Ni II), A., 617.

spectra of Zn II, Cd II, In III, and Sn IV, A., 859.

spark spectra of germanium, A., 1207.

Lang, R. J. See also Sawyer, R. A.

Lang, S., and Rigo, L., action of magnesium salts on blood-sugar, A., 350.

Lang Bridge, Ltd. See Norton, J. B.

Langbein, J., composition to be added to cement mixings for cold glazes or the like, (P.), B., 131\*.

Langbein-Pfanhauser-Werke Akt.-Ges., production of dense, even deposits of chromium, (P.), B., 135.

electrolytic deposition of chromium, (P.), B., 290.

Lange, A. R. See Bankes, C. H.

Lange, B. See Eitel, W., and Herzog, R. O. Lange, E., thermochemistry and refractometry of strong electrolytes, A., 26.

Lange, E., and Crane, P. W., electric charge of [solid] silver iodide in saturated solutions of silver iodide, A., 758.

Lange, E., and Meixner, J., individuality of heats of dilution of strong electrolytes, A., 767, 1389.

Lange, E., and Monheim, J., calculation of the integral and differential heats of solution and dilution of potassium chloride and of the molecular heat of potassium chloride solutions at great dilution, A., 268.

Lange, E., and Rounsefell, E. O., adiabatic calorimetry. I. Temperature changes of the order of 1°, A., 1238.

Lange, E. See also Koenig, O.

Lange, F. See Loewe, Siegfried.

Lange, Fritz. See I. G. Farbenind. A.-G.

Lange, H., and Grossmann, E., behaviour of blood-sugar in experimental adrenal insufficiency, A., 466.

Lange, H., and Schloss, J., blood-sugar during the night and morning [in diabetics], A., 465.

Lange, J. Seo Ebert, L.

Lange, N. A., Ebert, H. L., and Youse, L. K., carbamides and thiocarbamides from vanillylamine; constitution and taste of pungent principles, A., 924.

Lange, N. A., and Haupt, H. S.,  $\beta$ -naphthyl sulphide as a byproduct in preparation of β-naphthonitrile, A., 1063.

Lange, W., difluorophosphoric acid and its analogy to perchloric acid in salt formation; monofluorophosphoric acid and the similarity of its salts to the sulphates, A., 662. utilibrium phosphoric acid-hydrogen fluoride-monofluo-

equilibrium

phosphoric acid-water, A., 764.

Langenbeck, W., organic catalysts. III. Formation of oxamide from dicyanogen in presence of aldehydes, A., 432.

radical nature of dark-coloured, dimeric diarylketens, A., 700. Langenbeck, W., and Hutschenreuter, R., glyoxaline derivatives. IV. Degradation of histidine to y-hydroxyornithine, A., 939.

Langenberg, F. C., alloy steel, (P.), B., 821.

Langenberg, F. C., and Grossmann, M. A., manufacture of steel, (P.), B., 176.

manufacture of steel and alloy steels, (P.), B., 479.

Langenberg, F. C., and Houghton & Co., E. F., carburiser [for case-hardening iron or steel], (P.), B., 686.
Langen van der Valk, J. H. A. P., explosion regions of some gas

and vapour mixtures in which carbon monoxide is the only or principal inflammable gas, A., 403.

Langer, A., volumetric determination of santonin in pharma-

ceutical preparations, B., 376:

Langer, R. M., incoherent scattering, A., 379.

quantum mechanics of chemical reaction, A., 983.

atomic absorption coefficients, A., 1349.

Langeron, Paget, M., and Lohéac, P., existence of adrenaline, free and otherwise, in human adrenals after death, A., 463.

Langfeldt, E., production of a sugar solution [from manioc], (P.), B., 833.

Langford, G., and McKenna Process Co. of Illinois, heat treatment of [steel] bars, (P.), B., 856. Langguth, IV., and Hummel, C., production of photographs in

natural colours, (P.), B., 494\*.

Langiert, J. See Weil, S.

Langley, W. D., [preparation of] p-bromophenacyl bromide, A.,

1071.

Langmeier, A. See Hercules Powder Co., and Kaiser, H. E. Langmuir, I., and Kingdom, K. H., contact potential measurements with adsorbed films, A., 990.

Langmuir, I. See also Tonks, L.

Langseth, A., relation between Raman spectra and ultra-violet absorption, A., 976. Langstroth, G. O. See Cooper, D.

Langthaler, E., rational production of mixed gas, including the use of composite producer gas ("Doppelgas"), B., 194. Lanigan, H. See Cunliffe, P. W.

Lanning, J. H. See Harrel, C. G.

Lannon, F. P., jun., and American Smelting & Refining Co., production of zinc dust, (P.), B., 134.

Lansing, W. D., new terms in the spectra of Al I, Ga I, and In I, A., 1206

Lansing, W. D., and Tyler, W. F., spectra of boron, A., 1205.

Lantz, E. A. See Symmes, E. M.

Lantz, R., and Wahl, A., derivatives of naphthaquinones, A., 1302. Lantz, R. See also Soc. Anon. des Mat. Col. et Prod. Chim. de St. Denis, and Wahl, A.

Lantz, V. See Grasselli Dyestuff Corporation. Lanyar, F., and Lieb, H., effect of the blood-serum of the healthy and alcaptonuric individual on homogentisic acid, A., 840.

Lanyar, F. See also Lieb, H

Lanzing, (Miss) J. C., and Wolk, L. J. van der, conductometrio titration of phosphoric acid with sodium hydroxide, A., 284. Lapenta, V. A., manufacture of a colloidal absorption [product] of hydrogen chloride, (P.), B., 392.

electro-endosmosis method and apparatus, (P.), B., 527.

Lapin, H. See Fichter, F.
Laplagne, P. See Mouren, C.
La Plant, S. H. See Newitt, F. T.
La Porta, A., distillation of bituminous limestones for the production of Italian mineral oil, B., 585.

Laporte, M., and Goldstein, L., activation in rare gases, A., 1358. Laporte, O., term representation in complex spectra, A., 1349. Laporte, Ltd., B., Weber, I. E., and Bennett, A. N. C., manufac-

ture of titanium pigments, (P.), B., 826.
Laporte, Ltd., B., Weber, I. E., and Slater, V. W., manufacture of

barium peroxide, (P.), B., 718.

Lapp, G. W., vacuum slip process of removing air from clay bodies, B., 19.

Laptev, A., volumetric analysis of oil cakes for their oil content and moisture, B., 27.

Lapworth, A., and Robinson, R., ortho-para ratio in aromatic substitutions, A., 546.

Laqueur, E., and De Jongh, S. E., female sexual hormone, menoformon. X., A., 850.

Laqueur, E., Wolff, L. K., and Dingemanse, E., vitamin-A in the liver, A., 726. Lara, C. B. See Cruz, M. C.

Lardy, G., and Société pour la Fabrication de la Soie "Rhodiaseta," production of artificial yarns or threads, (P.), B., 51\*.

Lark-Horovitz, K., permeability test with radioactive indicators, A., 361.

Larmour, R. K., correlation between total nitrogen of bases and arginine-nitrogen and between total nitrogen of bases and lysine-nitrogen of various proteins, A., 458. single-figure estimates of baking scores, B., 658.

Larmour, R. K., and Macleod, A. G., application of the bromate differential test in the estimation of baking quality of Canadian hard red spring-wheat flour, B., 794.

La Rotonda, C., rennin coagulation; influence of hydrogen ions on the separation of casein by the action of electrolytes, A.,

Larrabee, C. P. See Bright, A. A.

Larrowe Construction Co. See Tressler, D. K.

Larsen, E. S., humite group, A., 788

Larsen, E. S., Bauer, L. H., and Berman, H., norbergite from Franklin, N.J., A., 788.

Larsinos, G. J., and Beaumont, A. B., repair of soil filter tubes, B., 408.

arson, A. T. See L'Air Liquide Soc. Anon. pour l'Étude et l'Exploit. des Proc. G. Claude. Larson, A. T.

Larson, C. See Sundelin, G.

Larsson, E., influence of salts on the activity of acetic acid molecules in aqueous solution, A., 1009.

Larsson, E. [with Holmberg, N.], electrical dissociation of dibasic acids. V. Dissociation constants of the three hydroxybenzoic acids, A., 1236.

Larvex Corporation, and Minaev, M. G., rendering material mothproof, (P.), B., 1012.

Laryukov, I., wet purification method for hydrogen, B., 392.

Lasausse, E., Guérithault, B., and Pellerin, determination of the degree of ripeness of peas, B., 621. Lasch, T. M. See Dworzak, R.

Laschtschenko, P. N., and Morozova, A. I., solubility and energy of reciprocal transformation of different forms of calcium sulphate, A., 1387.

Laska, A. L. See I. G. Farbenind. A.-G.

Laska, L. See Grasselli Dyestuff Corporation. Lasnitzki, A., and Rosenthal, O., influence of cations on the fermenting power of tumour cells. I., A., 718.

**Lassieur**, A., automatic apparatus for  $p_{\rm H}$  measurement, A., 44.

Lassieur, A. See also Kling, A.

Laszlo, E., viseosimeter with double set of radiators, A., 44. Latham, G. H., thickness of adsorbed vapour films. II., A., 134.

Latham, L. See Brit. Celanese, Ltd.
Lathrop, F. H. See Hartzell, A.
Latimer, W. M., and Kasper, C., theoretical evaluation of the entropics of aqueous ions, A., 1145.

Latimer, W. M. Sec also Greensfelder, B. S. Latorre, J. Sec Delcourt.

Latrobe Electric Steel Co. See Giles, D. J.

Latshaw, M. See Silica Gel Corp.

Latshaw, W. L., and Zahnley, J. W., magnesium and calcium chlorates as substitutes for sodium chlorate for killing field bindweed, B., 410.

Lattey, R. T., and Gatty, O., dielectric constants of imperfect

conductors, A., 1128.

Laube, G. See Raudnitz, H.

Laubengayer, A. W., collapsing temperatures of various kinds of laboratory glass tubing, A., 419.

Lauber, H., preparation of sulphite liquor, B., 243. Laucks, I. F., Banks, H. P., Rippey, H. F., and Laucks Laboratories, Inc., cleansing and preparing for storage and market fruit after harvesting, (P.), B., 1030.

Laucks, I. F., Davidson, G., and Laucks, Inc., I. F., vegetable glue and its production, (P.), B., 141. manufacture of vegetable glue, (P.), B., 141\*.

Laucks, I. F., and Old Ben Coal Corporation, carbonisation of

coal and similar material, (P.), B., 631.

Laucks, I. F. See also Cone, C. N., and Greene, F. C.

Laucks, Inc., I. F. See Cone, C. N., Davidson, G., and Laucks, I. F.

Laucks Laboratories, Inc. See Laucks, I. F.

Laue, M. von, X-ray method for determining the size and shape

of crystalline ultramicroscopic particles, A., 868. Lauer, W. M., and Dobrovolny, F. J., adaptation of Pregl's microcombustion to a semi-micro-combustion method for determination of carbon and hydrogen, A., 1323.

Lauer, W. M., and Sunde, C. J., adaptation of Pregl's microcombustion to a semi-micro-combustion method for determination of nitrogen, A., 1323.

Lauer, W. M. See also Heisig, G. B.
Laufenberg, W. See Eibner, A.
Laughlin, W. C., and Laughlin Filter Corporation, centrifugal separator, (P.), B., 230\*

Laughlin Filter Corporation. See Laughlin, W. C.

L'Augmentine Société Anonyme. See Augmentine Soc. Anon.

Laurenain, M.L. See Guillaumin, C.O. Laurent, Y. See Rothery, F.

Lauritsen, C. C. See Millikan, R. A.

Lauro, M. F. See Trevithick, H. P. Lauter, C. J. See Dominick, J. F.

Lauter, F., and Lignel Corporation, aggregating particles of wood, (P.), B., 285.

treating wood, (P.), B., 434.

Lauth, H. See Heller, G. Lava, V. G., and Etorma, S. B., American and Philippine cigarettes, B., 835.

Lava, V. G., and Hemedes, E. D., behaviour of the antimony electrode in buffered and unbuffered solutions, A., 769. Lavelle, E. F. See Dillon, T.

Laves, W., histochemical detection of urea, A., 839.

occurrence and behaviour of methæmoglobin in cadavers, A., 1097.

Lavialle, P., effect of desiccation on the antiscorbutic principle, A., 359.

Lavin, G. I., and Stewart, F. B., indication of hydroxyl in a watervapour discharge tube, A., 520.

Lavine, I., and Sutherland, R. L., calculations on a lignite dryer with psychometric chart, B., 764.

Lavrovski, K. P. See Bauer, E., and Zelinski, N. D.

Lawaczeck, F. See Bartling, F. Lawaczeck, H., behaviour of the hexosephosphoric acid of the blood towards insulin, A., 102.

behaviour of the hexosephosphoric acid of the blood towards adrenaline, A., 102.

determination of hexosephosphoric acid in blood; its occurrence in the normal and diabetic organism, A., 595.

behaviour of calcium in administration of adrenaline, A., 609. Lawrence, E. O., and Edlessen, N. E., photo-ionisation of the vapours of easium and rubidium, A., 1121.

photo-ionisation of potassium vapour, A., 1356.

Lawrence G. C., relative velocities of the a-particles emitted by certain radioactive elements, A., 370.

Lawrence, H. S. See United Water Softeners, Ltd.

Lawrence, J. See Dobson, G. M. B.

Lawrence, J. S. See Dill, D. B.

Lawrie, L. G., microscopical investigation of artificial silk fibres, B., 125\*.

Lawrie, L. G. See also Horsfall, Lawson, A. See Patterson, T. S. See also Horsfall, R. S.

Lawson, W. L., production of alkaline earth oxides, (P.), B., 1044.

Lay, E., production of diffused layers of metals [on iron], (P.), B., 561.

Lay, J. T.See Cornog, I.

Laycock, (Sir) J. F. See Appleyard, K. C.

Layng, T. E. See Urbana Coke Corp.

Lazarev, N. V., toxicity of various hydrocarbon vapours, A.,

Lazarin, I. See Brikker, F.

Lazier, W. A. See Du Pont de Nemours & Co., E. I., and Marvel, C. S.

Lazote Inc. See Beekley, J. S., Blake, F. C., and Claude, G. Lea, C. A. See Chariton, J.

Lea, C. H., component glycerides of cacao butter, B., 331.

Lea, C. H. See also Collin, G.

Lea, F. C., penetration of hydrogen into metal cathodes and its effect on the tensile properties of metals and their resistance to repeated stresses; effect of non-electrolytic baths and nickel plating on these properties, B., 360.

Lea, F. C., and Batey, R. A., properties of cold-drawn wires, with particular reference to repeated torsional stresses, B., 478.

Lea, F. M., properties of breeze and clinker aggregates [for concrete], and methods of testing their soundness, B., 20. breeze and clinker aggregates [for concrete], B., 324. Lea, H. I., and Humphrey, C. W., manufacture of aluminium

chloride, (P.), B., 896.

Leamon, W. G., converting heavy mineral oils into lower-boiling products, (P.), B., 882. Leask, J. P. See Peabody Engineering Corp.

Leatherman, M., and Bartlett, E. P., determinations of inert gas content of gas mixtures by means of calcium as an absorbent,

Leathwood, M. N. See Wood, A. R.

Leavell, G., the C<sub>4</sub>-saccharinic acids. IV. Preparation of βydihydroxybutyric acid, A., 48.

Leavenworth, C. S. See Vickery, H. B.

Leaver, E. S., and Woolf, J. A., cyanide extraction of gold and silver in arsenical and antimonial ores, B., 478. Leaver, J. M., and Pacific Lumber Co., manufacture of artificial

silk, (P.), B., 91. Leavitt, H. W., Gowen, J. W., and Jenness, L. C., influence of aluminium on mortar strength, B., 1016. joint influence of iron and aluminium in native [Maine] sands on

mortar strength, B., 1016.

Lebeau, P., and Damiens, A., preparation of oxygen fluoride, A., 779.

Lebedev, A. F., determination of the maximum molecular moisture-holding capacity of soils by centrifuging, and the characterisation of the mechanical properties of soils by this determination, B., 991.

Lebedev, S. V., and Yakubchik, A. O., catalytic hydrogenation of different types of unsaturated compounds. IV. Hydrogenation of conjugated systems: piperic acid, A., 442, 1069\*.

Lebermann, F., caseinogen precipitation at the isoelectric point, A., 591.

Le Blanc, M., and Jäckh, R., variation in the concentration of dilute amalgams of alkali and alkaline-earth metals caused by passing an electric current through them, A., 1016.

Le Blanc, M., and Kröger, M., cleavage of stretched rubber and the displacement of the cleavage plane by the addition of fillers, B., 65.

Le Blanc, M., and Möbius, E., cobalt oxides and systems with oxygen, A., 1028

Le Blanc, M., Richter, K., and Schiebold, E., "resistance" limits, peaks in conductivity curves, and X-ray interferences in metallic mixed crystals, A., 492.

Le Blane, M., and Zellmann, R., alkali perborates in the solid state, A., 661.

Le Boucher, L., nitrites. I. Nitrites of nickel and cobalt; "pyridinates," A., 781.

nitrites. II. Ammines of nickel nitrite, A., 898.

Leboucq, J., detection of bismuth in the inflammatory nodules after intramuscular injections, A., 955. determination of potassium cyanate, B., 244.

Leboucq, J. See also Bougault, J.

Le Boutillier, A., and Western Electric Co., heat treatment of articles, (P.), B., 479.

Lebre, F., heating by air and apparatus therefor, (P.), B., 501.

Le Breton, E. See Kahn, M. Lebrun, P. F. J., preparation of luminescent tubes, (P.), B., 401. luminescent tube, (P.), B., 527.

Lecar Carbon Co. See Mathewson, S. B.

Lecat, M., binary azeotropes, XII., XIII., and XIV., A., 255, 756, 995.

azeotropism in binary systems containing an acid, A., 756. azcotropism in binary systems containing a phenol, A., 995. azeotropism in binary systems containing hydroxyl compounds, A., 1373.

Le Chatelier, F. See Portevin, A.

Lecher, O., burning of calcareous clays, B., 940. Lechler, P., preventing corrosion of submerged iron, (P.), B., 856.

Lechner, G. See I. G. Farbenind. A.-G. Leclerc, E. See Joassart, N.

Lecomte, J., elimination of stray radiations in an infra-red spectrometer, A., 374.

Lecomte, J. See also Lambert, P. Lecoq, R. See Random, (Mme.) L.

Lécorché, H., and Jovinet, P. L., stabilisation of nitroglycerin powders by diethyldiphenylurea, B., 113.

transformation products formed from centralite during storage

of SD powder, B., 379.

Lecoultre, F. C. F. See Conod, G.

Lecuir, R. See Pascal, P.

Ledbury, W. See Smith, F. E.

Ledebur, J. (Frhr.) von, micro-respiration apparatus for simultaneous determination of oxygen and carbon dioxide, A., 1324. Lederer, A., manufacture of electron-emitting bodies, (P.), B., 135. apparatus for manufacture of carbon, (P.), B., 274\*, 844\*.
manufacture of carbon filaments, (P.), B., 688.
Lederer, E. L., application of the Fourier functions to diffusion,

A., 24.

application of the Fourier functions to sedimentation, A., 26. injurious action of heavy metals on soaps during the washing process, B., 986. Lederer, P. See Kindscher, E.

Lederle, E., and Rieche, A., alkyl peroxides. IV. Ultra-violet absorption of hydrogen peroxide and of the simple mono- and di-alkyl peroxides in solution, A., 1422.

Lederle, E. See also Wolf, K. L. Ledrut, J. See Juliard, A.

Lee, A. P., and Rutzler, J. E., alkaline-earth stearate [emulsions], B., 529.

Lee, D. C., [anti-friction metal] alloy, (P.), B., 604. Lee, D. H. K., and Drew, W. R. M., effect of Vinca rosea [leaves] on the blood-sugar of rabbits, A., 1488.

Lee, G. van der, viscosity of flour suspensions, B., 187.

Lee, L. L. See Joffe, J. S. Lee, N. See Cunniff, B.

Lee, O. I. See Orelup, J. W. Lee, R. C. See Lutz, A.

Lee, R. Y. H. See Rogers, A.

Lee, W. B., and Rysselberge, P. J. van, helicoidal configuration in long-chain compounds, A., 1423.

Leech-Porter, J. A. H., and Alty, T., influence of a high-potential direct current on the conductivity of an electrolyte, A., 401.

Leeds, H. See White, J. R. Leeds, R. E. See Randall, J. T.

Leeds & Northrup Co. See Baylis,  $J.\ R.$ , and Smith,  $I.\ B.$  Leermakers,  $J.\ A.$  See Gilman, H.

Lees, J. H., and Skinner, H. W. B., variation of the intensities in the helium spectrum with the velocity of the exciting electrons, A., 732.

Leese, C. E. See Hines, H. M. Leese, L. F. W., recovery of zinc [from sulphate leach liquors], (P.), B., 525.

Leete, J. F. See Helferich, B.

Lefebure, V., manufacture of plasters from anhydrite, (P.), B., 853.

Le Fèvre, R. J. W., interaction of piperidine with nitro- and halogenonitro derivatives of xanthone and diphenylene oxide, A., Ĭ93.

diphenyl derivatives of the Kaufler type, and the formation of dibenzoctdiazines, A., 705.

Leffer, L. G., and Bachstein, H., manufacture of soft soap, (P.), B., 565.

Leffmann, H., tests for acetone and acetaldehyde, A., 795. Leffmann, H., and Pines, C. C., precipitant for aldehydes, A., 1042.

tests for acetone and aldehyde, A., 1425.

photosensitiveness of nitroprussides, A., 1431.

tests for methyl alcohol, B., 886.

Le Floch, G., manufacture of dyes from naphthidine, (P.), B., 89\*. Legeler, E. See I. G. Farbenind. A.-G.

Legendre, G. F., and Société des Établissements Barbet, rectification of acetic acid, (P.), B., 237\*.

Legendre, R. A., preservation of flour, grain, grain products, etc., (P.), B., 376.

preservation of grain, flour, and bran of cereals, (P.), B., 535. Lehmann, F. B. (Lehmann, J. M.), filter presses, (P.), B., 268.

Lehmann, G. See Manchot, W. Lehmann, G. D. See Jenkin, C. F.

Lehmann, J. F. See Boyle, R. W. Lehmann, J. M. See Lehmann, F.

See Lehmann, F. B.

Lehmann, M., filter material for hot, or acid, or alkaline gases and liquids, (P.), B., 469.

Lehmstedt, K., and Hundertmark, H., acridine. III. Hydrogenation of acridine with sodium amalgam, A., 454. acridine. IV. Formation of diacridyl derivatives from N-

methylacridone, A., 706. two ms-tetrahydro-9:9'-diacridyls (?), A., 1079. Lehnartz, E., determination of small amounts of lactic acid, A.,

48. correlation of synthesis and breakdown of active substances of muscle, A., 1337.

Lehnartz, M., is there a definite relationship between lactic acidand ammonia-formation in muscle contraction? A., 1332.

Lehrmann, L., fatty acids associated with rice starch, A., 1040. Leibenson, E. See Katz, G.

Leiboff, S. L., colorimetrio determination of lipin-phosphorus in blood, A., 88.

Leiboff, S. L., and Kahn, B. S., determination of carbamido in blood, A., 1190.

Leiboff, S. L. See also Kahn, B. S. Leibowitz, J. See Kisch, B. Leicester, F. D. See Golding, H. D.

Leichtmetall-Verwertungs-Ges.m.b.H., production of enamel, (P.),

Leimbach, G., and Pfeiffenberger, A., system NaNO<sub>3</sub>-Na<sub>2</sub>SO<sub>4</sub>-MgCl<sub>2</sub>-H<sub>2</sub>O in the neighbourhood of 0°, 10°, 25°, 75°, and 100°, A., 400, 1013.

Leinbach, L. R. See Frey, R. W. Leiningen, W. (Graf) zu, "terra rossa" as residue from dissolution of marine limestones, A., 905.

Leipert, T., micro-analytical determination of iodine in organic substances, A., 1323.

Leipert, T. See also Fromm, E.

Leipunski, A. J., oxidation of mercury in presence of glowing platinum, A., 153.

Leipunski, A. J., and Sagulin, A. V., reaction of excited mercury with oxygon, A., 155, 777.

Leipunski, A.J. See also Kondrateev, V.

Leipziger Schnellpressenfabr. Akt.-Ges., producing points of adhesion for galvanic deposits on light-metal bodies, (P.), B.,

Leisek, E. See Kailan, A.

Leiss, C., vacuum spark-gap, A., 374. absorption vessel for variable thicknesses of liquid, A., 374.

Leistner, W. See Barkan, G.

Leithe, W., natural rotation of polarised light by optically active bases. II. Rotation of d-a-phenylethylamine and its hydrochloride in solution: rotation of active tetrahydro-2-mothylquinoline, A., 647.

natural rotation of polarised light by optically active bases. III. Rotation, refraction, and volume of organic bases in

solution, A., 1079.

natural rotation of polarised light by optically active bases. IV. Rotation of synthetic isoquinoline derivatives, A., 1461. Leitmeier, H., detection of phosphorio acid in minerals and rocks,

A., 162 Leitmeier, H., and Feigl, F., detection of magnesium in silicates, A., 669.

Leitner, H., [positive plate for] electric accumulators, (P.), B., 688.

[plastic mass for] electric accumulator [plates], (P.), B., 824. Lejeune, A., determination of tin in rubber-coated [tinned copper]

wires, B., 249. Lejeune, G. Sco Marie, C.

Lellep, O., granulation of pulverised materials, (P.), B., 306. roasting cement in a rotary kiln, (P.), B., 395.

Lemaire, A. See Löper, M.

Lemaire, J. H., manufacture of sheets of glass, (P.), B., 474. Lemarchand, and Lemarchand, (Mme.), application of the law of mass action to the double decomposition of [solutions of] salts, A., 266.

Lemarchand. See also Lemarchand, (Mme.).

Lemarchand, (Mme.), and Lemarchand, equilibrium constant in double decompositions in aqueous solution, A., 764.

Lemarchand, (Mme.). See also Lemarchand.

Lemarchands, J., transformation (particularly saponification) of the reserve fat of seeds during germination, A., 1204. Le Mare, E. B. See Pilkington Bros., Ltd.

Lematte, L., and Kahane, E., mathematical relationships of urinary characteristics, A., 592.

Lemberg, R., oxidising action of alkalis, A., 551. pigments of red algæ, A., 962.

Lemmel, H. See Adler, A. Lemmens, J. F. See Waterman, N.

Lemmermann, O., activity of silicio acid [in soils], B., 335.

Lemmon, R. J., froth flotation [agents], (P.), B., 725. Le Moal. See Warcollier.

Lemon, H. B., increasing the adsorptive power of charcoal, (P.), B., 385.

Lempen, H. See De Diesbach, H.

Lenaerts, P. See Dantinne, R. Lenander, N. E., and Orkla Grube-aktiebolag, recovery of zine from zino [chloride]-bearing solutions, (P.), B., 95\*.

Lenart, P., mixing apparatus, (P.), B., 498.
Lendle, L., combined narcosis. I. Ether and chloroform. II.
Nitrous oxide and ether. III. Acctylene and ether, A., 468.
Lendorff, P. See Naegeli, C.

Lenher, S., intensive drying of liquids, A., 872. intensively dried carbon tetrachloride, A., 1371.

superheating and the intensive drying of liquids, A., 1372.

Lenher, S., and Taylor, G. B., movement of gases around electrically heated wires, A., 1373.

Lenher, S. Sco also Bodenstein, M., and Kistiakowsky, G. B. Lennard-Jones, J. E., electronic structure of some diatomic molecules, A., 1360.

Lennard-Jones, J. E., and Dent, (Miss) B. M., change in lattice spacing at a crystal boundary, A., 17. Lennard-Jones, J. E. See also Garner, W. E.

Lenning, A. See Electrolux, Ltd.
Lennon, J. J. See Ryan, H.
Lenormand, H., preparation and properties of some double chlorides of bismuth and quinino, A., 1089, 1273.
Lent, E. E. See Martin, W. H.

Lenz, W., wave function and velocity distribution in degenerate

gases, A., 1125.

Lenze, F., and Metz, L., accuracy of the methyl-violet, zinc iodide-starch, and Abel heat test as compared with other methods of testing the stability of smokeless powders, B., 151. Lenzmann, R. See "Kolloidchemie" Studienges.m.b.H.

Leo, M. See Wittig, G. Leövey, F., micro-determination of the residual nitrogen content of tissues, A., 1500.

Leövey, F., and Kerpel-Fronius, E., experimental uramia and chloride content of the cortex, A., 345.

Leövey, F. See also Kerpel-Fronius, E.

León, A., and Charro, A., di- and tetra-hydro- $\beta$ -naphthoic acids obtained by catalytic hydrogenation, A., 555.

Leonard, A. G. G., and Whelan, P. F., spectrographic analyses of Irish ring-money and of a metallic alloy found in commercial calcium carbide, B., 438. Leonard, C. S., pharmacology of bismuth salts. V. Distribution

of bismuth in tissues, A., 351.

Leonard, C. S., and Love, R. B., pharmacology of bismuth salts. VI. Permeability of the placenta to bismuth, A., 351.

Leonard, C. S., and Seibert, A. F., pharmacology of bismuth salts. VII. Concentration of bismuth in the blood of dogs after intramuscular injection of bismuth antiluctios, A., 351.

Leone, P., significance of lower and higher critical solution temperatures; ternary system water-nicotine-acctone, A., 132.

Leone, P. Sco also Bargellini, G.

Leonhard, K. See Dziewoński, K. Leonhardi, H. See Wienhaus, H.

Leonhardt, H. See Dieterle, H., and Schneider, Wilhelm.

Leonhardt, J., morphological and structural relationships of meteoric iron in relation to its evolution, A., 1220.

Leonhardt, W. See Scholl, R.

Leontovitsch, M., Raman effect in potassium carbonate solution, A., 741.

Leontovitsch, M. See also Landsberg, G. Leopold, H. See Donath, E.

Lepape, A., and Colange, G., relation between the ozone contents of air at the earth's surface and air in the high atmosphere, A.,

Lepape, A. See also Curie, M.

Lepeschin, V. V., composition of protoplasm, A., 208.

Lepkovsky, S. See Evans, H. M., and Guyer, M. F.

Lerch, W., Ashton, F. W., and Bogue, R. H., sulphoaluminates of calcium, A., 662. Lerciu, A. A. See Voinchet, A. L. J. Leroux, A. See Krause, O.

Leroux, J. A. A., and Raub, E., silver-copper eutectic, A., 399.

Leroux, P., influence of temperature on the absorption [of light] by tourmaline, A., 379.

study of the absorption of a sample of blue rock salt, A., 489. absorption of a crystal of dialogite, A., 978.

Leroy, (Mlle.) B. See Bougault, J. Leschewski, K., and Holmann, K. A. [with Galotti, H.], oxidation of ammonia to calcium nitrate at a calcium oxide surface, A.,

Leschik, G., generation of oxygen from washing and bleaching

agents containing persalts, (P.), B., 27.
Lesienieka Fabr. Drozdzy prasowanych i spirytusu Spolka Akcyjna. Sco Aktieselskabet Dansk Gaerings Ind.

Lesienitzer Spiritus & Presshefefabr. A.-G. See Aktieselskabet Dansk Gaerings Ind.

Lesley, B. E., and Christie, A. W., use of the refractometric method in determination of oil in avocados, B., 302.

Lesley, W. J., reactions between hydrophilic sols. I. Gelatin and silicic acid, A., 1382.

Leslie, E. H., distillation, (P.), B., 964.

Leslie, E. H., and Baker, E. M., distillation of petroleum, (P.), B., 970.

Lésniański, W., acridone derivatives, A., 824.

Lespieau, R., dodccane  $a\mu$ -diol and linear true diacetylenes,  $C_{13}H_{20}$  and  $C_{20}H_{34}$ , A., 170.

diacetylenic heterocyclic compound, A., 421.

Lespieau, R., and Journaud, hepta-aζ-di-ineno and nona-aθ-diinene, A., 790.

Lespieau, R., and Wiemann, preparation of acetylenic hydrocarbons from epidibromohydrins, A., 675.

use of substituted epidibromohydrins for the preparation of acetylenic hydrocarbons;  $\Delta_{\gamma}$ -hexene and  $\Delta_{\gamma}$ -hexinene, A.,

Lesser, E. J., and Ammon, R., carbohydrate metabolism of the white mouse with and without administration of insulin. IV.,

Lessheim, H., quantum theory of molecule formation, A., 122. Lessheim, H., and Samuel, R., systematics of the types of binding of diatomic molecules, A., 1367.

Lesslie, (Miss) M. S., and Turner, E. E., isomerism of derivatives

of 2-phenylnaphthylone-1:3-diamine, A., 1061. Lesslie, (Miss) M. S. See also McKenzie, A.

Lesure, A., and Dunez, A., determination of sulphur in blood and organic products, A., 950.

Lesure, A. See also Loeper, M. Leszcynski, V. J., excretion of picric acid in the urine after different methods of injection into animals, A., 956.

Lethaus, H., purine bases in urine of dogs, A., 954.

Le Thomas, A., properties of special brasses containing niekel and manganese, B., 438.

influence of structure of cast iron on changes due to high temperature, B., 981.

Lettermann, A., manufacture of soap, (P.), B., 689.

Leture, E., determination of calcium carbonato in calcium glycerophosphate, lactophosphate, and the mono- and di-acid phosphates, B., 111.

Leuchs, H., strychnos alkaloids. XLVIII. Fission of the oxime of brucinonic acid by alkali, A., 457. rychnos alkaloids. L. Transformations

strychnos alkaloids. L. Transformations of the base,  $C_{17}H_{20}O_2N_2Br_2$ , from cacothelin, A., 1320. Leuchs, H., Bender, K., and Wegener, W., strychnos alkaloids. LXVII. Behaviour of derivatives of Hansson's acid, C19H22O6N2, particularly when oxidised by bromino or mercurio oxide, A.,

Leuchs, H., Heller, A., and Hoffmann, Alfred, additive reaction of indolenines. III. Ketonic fission of acetoacetic esters, A., 704. Leuchs, H., and Hoffmann, Alfred, strychnos alkaloids. II.

Oxidation by permanganate of the substances  $C_{19}H_{12}O_{9}N_{2}$  and  $C_{19}H_{12}O_{9}N_{2}$  obtained from Hanssen's acid, A., 944. strychnos alkaloids. LII. Reduction and oxidation of the  $C_{17}$ 

alkaloids from brucine, A., 1320. Leuchs, H., and Krönnke, F., strychnos alkaloids. LI. Degradation of derivatives of brucine and strychnine to the same

product, A., 1320. strychnos alkaloids. LIII. Oxidation products of the reduced Hanssen acid, A., 1470.

Leuchs, K., manufacture of artificial silk, etc., from viscose, (P.), B., 125.

Leuchs, O. See I. G. Farbenind, A.-G.

Leuchtenberg, W., removing hydrogen sulphide from coal gas or water-gas, (P.), B., 88\*.

Leuck, G. J., Perkins, R. P., and Whitmore, F. C., mercuration of naphthalie acids, A., 946.

Leuck, G.J. See also Whitmore, F.C.

Leulier, A., and Dreyfuss, Y., bromination of p-aminophenylarsinio acid, A., 945.

bromination of several phonylarsinic acids, A., 1320.

Leulier, A., Sedallian, P., and Clavel, (Mme.), diphtheria toxin; biological and chemical analysis, A., 850.

Leulier, A., Velluz, L., and Griffon, H., distribution of potassium

in the animal organism, A., 90. micro-determination of potassium in biological media, A., 109. micro-determination of oxalic acid, A., 614.

Leulier, A. See also Morel, A., Mouriquand, G., and Sedallian, P. Leutert, F. See Hieber, W.

Leuthardt, F., foundations and limitations of biological  $p_{\rm H}$  determinations, A., 858

Levaditi, C., liposoluble bismuth compounds, A., 351. Levaillant, R., isopropyl and n-propyl sulphates, A., 293. conversion of alkyl sulphites into chlorosulphonates and normal

sulphates, A., 1269. Levalt-Ezerski, M., real concentration of solutions, A., 392.

Levelt, W. H., and Wibaut, J. P., 2:6-dibromo- and 2:6-dichloropyridine-4-carboxylio acids and some derivatives, A., 704. Levene, P. A., and Bass, L. W., racemisation. VIII. Action of

alkali on proteins; racemisation and hydrolysis, A., 712. Levene, P. A., Bass, L. W., Rothen, A., and Steiger, R. E., effect of ionisation on optical rotation. IV. Amino-acids and

peptides, A., 504. Levene, P. A., Bass, L. W., and Steiger, R. E., structure and rate of hydrolysis of peptides, A., 301.

relation of structure to rate of hydrolysis of diketopiperazines. I. Hydrolysis of N-methyldiketopiperazine by alkali, A., 517.

relation of structure to rate of hydrolysis of peptides. Enzymic hydrolysis of dipeptides. VI. Hydrolysis of dipeptides by alkali, A., 723.

Levene, P. A., and Haller, H. L., configurative relationship of  $\beta$ -hydroxy- and  $\beta$ -chloro-butyric acids, and of  $\beta$ -hydroxy-butyric acid with methylpropylcarbinol, A., 424.

configurative relationship of lactic and a-chloropropionic acids; relationship of lactic acid and n-pentan- $\beta$ -ol, A., 540.

configurative relationship of ζ-methylheptan-β-ol with lactic acid; effect of unsaturation on optical activity, A., 1038.

configurative relationship of chlorosuccinic acid to chloropropionic and lactic acids, A., 1041.

configurative relationships of heptan-γ-ol and octan-δ-ol to lactic acid; effect of unsaturation on optical activity, A., configurative relationships of  $\alpha$ -,  $\beta$ -, and  $\gamma$ -chloro- and -hydroxy-

aliphatic acids, A., 1272. Levene, P. A., and Jorpes, E., rate of hydrolysis of ribonucleotides,

A., 517. Levene, P. A., and London, E. S., guaninedeoxypentoside from thymus-nucleic acid, A., 590.

thymonucleio acid, A., 1322.

Levene, P. A., and Mori, T., inosinic acid. IV. Ribophosphoric acid, A., 297.

deoxyribose and deoxyxylose and their bearing on thyminose, A., 1277.

carbohydrate group of ovomucoid, A., 1478. Levene, P. A., and Raymond, A. L., hexosediphosphate, A., 298.

hexosemonophosphate (Robison), A., 423. Levene, P. A., Raymond, A. L., and Walti, A., Walden inversion

in the hexoso scries, A., 683. Levene, P. A., and Rothen, A., reactivity of carbinols; Walden

inversion, A., 421.

molecular size of carbohydrates from egg-proteins, A., 1478. Levene, P. A., and Taylor, F. A., cerebronic acid. VI., A., 321. Levene, P. A., and Walti, A., polymerisation and condensation. V. Condensation products of methylcyclodihydroxyacetone, A., 1425.

Levene, P. A. See also Raymond, A. L., and Taylor, F. A. Levens, A. S., shrinkage effect of celite in mortar or concrete, B.,

Lévèque, P., heat-exchanging apparatus, (P.), B., 2.

Lévèque, P. H., and Société de Recherches et de Perfectionnements Industriels, compound fuel, (P.), B., 232.

Lever, J. See Rushton, J. L. Levermore, C. L., and General Chemical Co., roasting of fine ores (P.), B., 984.

Levi, A., calcium in urine and blood during administration of lemon juice, A., 1344. Levi, G. See Crippa, G. B.

Levi, G. R., catalysis by metals of the platinum group, A., 406. Levi, G. R., and Baroni, A., diethyl pentasulphides. I. and II., A., 1039.

diethyl triselenide, sulphodiselenide, and disulphoselenide, A., 1270.

Levi, G. R., and Delponte, G., coupling of H-acid as a function of the acidity and in presence of strong electrolytes, B., 590.

Levi, (Miss) M. See Gilbert, L. F., and Herz, W. Levi, T. G., 1:3-dithio-5-azine (formothialdine), A., 707.

dithioformic acid. II., A., 680.

new class of organic sulphur bases, A., 1055.

products of condensation of aminophenols with aldehydes, A., 1440.

benzylthiobenzamide, A., 1446.

Levin, A. A. See Meyer, C. F.

Levin, B. See Gibson, C. S. Levin, H. L. See Kirschbraun, L.

Levina, R. J. See Zelinski, N. D.

Levine, A. A., and Linford, H., orientation in the benzene ring; bromination of 2-aminoresorcinol dimethyl ether, A., 439.

Levine, A. A., and Wehmhoff, L., condensation of o-aminophenol and oxalic acid. I., A., 692.

Levine, H. D., manufacture of Javelle water [sodium hypochlorite solution], (P)., B., 206.

Levine, I. M., mercuration of neutral-red and its sulphonic acid,

Levine, S. Z., Wilson, J. R., and Gottschall, G., respiratory metabolism in infancy and childhood. VIII. Respiratory exchange in marasmus: basal metabolism, A., 1331.

Levine, S. Z., Wilson, J. R., and Rivkin, H., respiratory metabolism in infancy and childhood. III. Glycogen storage in children, A., 211.

Leviton, A. See Pierce, W. C.

Levitski, A. Y., colorimetric determination of phosphoric acid, A., 899.

Levit, A. F., combined grizzly and ball mill, (P.), B., 306. Levy, E. See Kuhn, R. Lévy, (Mlle.) J., and Gombinska, F., dehydration of s-disubstituted a\beta-glycols and the isomerisation of the corresponding ethylene oxides; influence of the affinity capacities of cyclic and aliphatic radicals, A., 555.

Lévy, (Mile.) J., and Tabart, A., relative affinity capacities of various radicals in the transformation of trisubstituted ethylene oxides, A., 448.

Lévy, (Mlle.) J. See also Tiffeneau, M.

Levy, L. A., and West, D. W., preparation of pigments, (P.), B.,

Lévy, (Mlle). L. S., probable rôle of ammoniacal complexes in the adsorption of copper and nickel salts by ferric hydroxide, A.,

Lévy, (Mile.) L. S. See also Geloso, M. Levy, M. See Balachowsky, D. Lévy, Marcel, and "Prodor" Fabrique de Produits Organiques Société Anonyme, manufacture of concrete, (P.), B., 248\*.

Lévy, M. L., alcohol from apples, B., 491.

Levy, M. M., determination of chloride in serum and red corpuscles, A., 950.

Levy, P. [with Pesch, T., Clauberg, A., and Raalf, H.], action of nitric acid on abietio acid and certain derivatives, A.,

Levy, S. A. See Gardner, H. A.

Levy, S. I., treatment of iron pyrites, (P.), B., 985\*. Levy, S. I., and Gray, G. W., separation of lead from solutions [containing, e.g., ferrous chloride and lead chloride], (P.), B., 206.

electrolysis of ferrous chloride, (P.), B., 217. treatment of pyrites, (P.), B., 361, 399.

treatment of [ferrous] chloride solutions, (P.), B., 517.

recovery of copper from copper-rich material, (P.), B., 525. Lewina, R. T. See Zelinski, N. D.

Lewis, A. H. See Hardy, F.
Lewis, A. W. See Rhodes, F. H.
Lewis, B., active nitrogen. II. Influence of surface on the afterglows in nitrogen and oxygen. III. Mutual effect of nitrogen and oxygen on their respective afterglows, A., 624. collision process accompanying the combination of nitrogen atoms in active nitrogen, A., 1359.

Lewis, B., and Schumacher, H.J., existence of an oxide of bromine, A., 160.

preparation and properties of an oxide of bromine, A., 1156. thermal reaction between bromine and ozone, A., 1395.

Lewis, C. P., and Minerals Separation N. American Corporation, froth-flotation concentration of [zinc-lead] ores, (P.), B., 923.

Lewis, D., transformation of austenite into martensite in a 0.8% carbon steel, B., 436.

Lewis, D. R. See Bangham, D. H.

Lewis, E. H., twenty months' results of dry-blast operation, B.,

Lewis, E. J. See Bidwell, C. C.

Lewis, F. D., centrifugal concentrating and amalgamating apparatus of the vertical type, (P.), B., 23.

Lewis, G. L. See De Waele, A.
Lewis, G. N., and Mayer, J. E., quantum laws and the uncertainty principle of Heisenberg, A., 487. thermodynamics of gases which show degeneracy, A., 648.

Lewis, H. B., [non-]occurrence of cystine in sweat in cystinuria, A., 1481.

Lewis, H. B., and Lough, S. A., metabolism of sulphur. XIV.

Cystinuria, A., 465. Lewis, H. B. See also Hodgson, P., and Lightbody, H. D.

Lewis, H. F., action of alkyl chlorides in the Würtz reaction, A.,

Lewis, H. F., and Chamberlin, E., preparation of mercury diisobutyl by the reaction of Frankland and Duppa, A., 304.

Lewis, H. F., and National Aniline & Chemical Co., Inc., purification of anthraquinone, (P.), B., 637.

Lewis, I. M., precipitation of organic iron compounds by bacteria, A., 355.

Lewis, J. R., catalytic decomposition of sodium hypochlorite solutions. II. Iron oxide as promoter in the copper oxide catalysis of sodium hypochlorite, A. 152.

Lewis, J. R., and Klockow, R. F., use of potassium iodate in back titration for the determination of the hypochlorite content of solutions, A., 162.

Lewis, J. S., low-temperature oxidation of hydrocarbons. I. Pressure-temperature curves of amylene-oxygen mixtures, A.,

Lewis, M. R., and Cossman, H., catalase of malignant tissue, A., 465.

Lewis, W., de-inking process, (P.), B., 204.
de-inking solution [for paper], (P.), B., 1043.

Lewis, W. C. M. See Goodall, A. W., and Price, H. I.

Lewis, W. K., Loomis, N. E., and Standard Oil Development Co., distillation [of oil], (P.), B., 424.

Lewis, W. K., and Standard Oil Development Co., refining of oils, etc., (P.), B., 508. production of gasoline hydrocarbons, (P.), B., 1041.

Lewitsky, M. A., and Lukomsky, M. E., tellurium-bismuth thermo-element and its applications, A., 534.

Lewy, F. See Eisner, G., and Rupp, E.

Leysaht, H., determination of sulphur in copper alloys containing tin, B., 22.

determination of sulphur in galena and metallic, B., 521. Leyst, C., treatment of fibrous materials for paper-making, etc.,

(P.), B., 595. Leyst, C., and Lymn, A. H., production of cellulosic material, (P.),

B., 848\*. Li, T. T., immediate effect of change of light on the rate of

photosynthesis, A., 1112. Liais, L., treatment of coal dust for utilisation in burners, (P.), B., 932.

Liamin, D. See Schilling, A.

Liander, H., utilisation of natural gases for the ammonia process, B., 717.

Libina, D. M. See Stscherbakov, J.

Libinson, I. M., manufacture of nitric acid by the ammonia oxidation process, B., 812.

Libmann, E. E. See Bourgin, D. G., and Guthrie, A. N.

Lichatschev, N. D. See Orlov, N. A. Lichtenberger, J. See Battegay, M.

Lichtenstadt, C., protection and fireproofing of materials, (P.), B.,

Lichtenstein, N. See Karrer, P.

Lichtenstern, R., manufacture of infusible asphalt masses of high elasticity, (P.), B., 769, 971\*. Lichtenthaeler, F. E., cooling of worts during fermentation, (P.),

B., 1029.

Liddel, L. U., hygroscopicity in flour ash and a discussion of direct

ash weighing, B., 657. Lieb, C. W., and Tolstoi, E., effect of an exclusive meat diet on chemical constituents of the blood, A., 1485.

Lieb, H., and Lanyar, F., iodometric determination of homogeneisic acid in urine, A., 593.

Lieb, H., and Mladenović, M., cerebroside storing in Gaucher's disease. III., A., 595.

Lieb, H., and Schadendorff, E., Millon reaction of urine in mental diseases, A., 1331.

Lieb, H. See also Epstein, E., Lanyar, F., and Mladenović, M. Liebesny, P., detection of alcohol in urine, A., 840.

Liebhafsky, H.A. See Nielson, R.F.

Liebisch, W. See Peyer, W. Liebowitz, I. See Stein, H.

Liebrecht, A., and Chemisch-Pharmazeutische Akt.-Ges. Bad Homburg, basic quinine solution, (P.), B., 453.

Liebreich, E., and Duffek, V., separation of chromium from solutions of chromic acid, A., 1402.

Liebreich, E., and Wiederholt, W., current density-potential

curves in the region of residual currents, A., 886.

Liebscher, E. See Stather, F. Liempt, J. A. M. van, thermoelements for high temperatures in a reducing atmosphere, A., 902.

reduction of alkali tungstates by hydrogen, A., 1027.

Liepatov, S., syneresis and hydration; theory of syneresis, A.,

syneresis, A., 763. Liepiatschkic, M. D., cyclic ammonia process, B., 156.

Lier, H. See Kruyt, H. R.

Lierenfeld, A., manufacture of electric lamps, discharge tubes, etc., (P.), B., 606.

Liesche, K., formation and composition of humus matter [in soil], B., 486.

Liesche, O., nomography, A., 115, 305, 495, 766, 1035, 1262. Liesegang, H., new desiccator shapes and insertions, A., 1161. fertilising action of some potash salts used singly and in mixtures, B., 757.

Liesegang, R. E., and Mastbaum, O., diffusion of hæmoglobin, A., 461.

Liesegang, R. E. See also Happel, P.

Liesegang, W., atmospheric precipitations. II. and III., A., 1035.

Lieser, T., constitution of cellulose xanthate. II., A., 799.

characterisation of celluloses, B., 240.

Lieske, R., theory of the formation of fusain, A., 1036.

Lieske, R., and Hofmann, E., fermentation of yeast at high gas pressures, A., 1199.
Lieske, R. See also Fischer, F.
Lifschitz, I., and Hooghoudt, S. B., Becquerel effect. II., A.,

Light, A. B. See Karr, W. G.

Lighthody, H. D., and Kenyon, M. B., diet deficient in tyrosine, A., 94.

Lightbody, H. D., and Lewis, H. B., metabolism of sulphur. Relation of protein and cystine content of diet to growth of hair in the white rat, A., 843.

metabolism of sulphur. XVI. Diet and composition of hair in the young white rat, A., 954.

Lightfoot, N. M. H., third report on heterogeneity of steel ingots. V. Effect of latent heat on solidification, B., 600.

Lignel Corporation. See Lauter, F.

Lilge, F., gas, vaporised-oil, or coal-dust burners for furnaces, (P.), B., 805.

Lilienfeld, L., improvement of vegetable fibrous material, (P.), B.,

coating, impregnating, dressing, sizing, and printing of fibrous material, (P.), B., 169.

treatment of artificial fibrous material, (P.), B., 677.

manufacture of cellulose derivatives, and of artificial materials, (P.), B., 774\*.

manufacture of artificial materials from viscose, (P.), B., 848. manufacture of viscose, (P.), B., 975.

manufacture of cellulose derivatives and solutions of cellulose, (P.), B., 1011

improvement of artificial fibrous materials, (P.), B., 1012. Lilienfield, W. E., and Lilienfield Bros. & Co., curing of tobacco, (P.), B., 1032.

Lilienfield Bros. & Co. See Lilienfield, W. E.

Liljenroth,  $F.\ G.$ , oxidation of ammonia, (P.), B., 851\*. Liljenroth,  $F.\ G.$  See also Kunstdünger Patent-Verwertung A.-G. Lillie, H. R., viscosity measurements in glass, B., 940.

measurement of absolute viscosity by the use of concentric cylinders, B., 963.

Lillie, R. D. See Goldberger, J.

Lillie, R. S., analogies between physiological rhythms and the rhythmical reactions in inorganic systems, A., 272.

circuit transmission and interference of activation waves in living tissues and in passive iron, A., 1242.

Lilly & Co., E. See Stuart, E. H.

Lim, R. K. S., Ni, T. G., Necheles, H., and Chang, H. C., carbohydrate metabolism of the normal, phloridzinised, and diabetic viviperfused stomach, A., 719.

Limburg, II. See Bataafsche Petroleum Maatschappij.

Limpach, O. See Grasselli Dyestuff Corporation. Linares, M., centrifugal apparatus for extracting juice from juicy

materials, (P.), B., 801. Linch, F. W. See Brit. Dyestuffs Corp., Ltd.

Linck, G., diffusion rings, A., 134.

Lincoln, R. See Craig, N.

Lind, O. See Riehl, E. Lind, S. C., theory of chemical action in electrical discharge, A.,

pyrex glass as a radium container, A., 1034. Lind, S. C., and Bardwell, D. C., ozonisation and interaction of oxygen with nitrogen under a-radiation, A., 1406.

Lind, S. C., and Glockler, G., chemical effects of semi-corona discharge in gaseous hydrocarbons, A., 1264.

Linda, S., and Ettinger, J., potentiometric titration of sulphuric acid, A., 1411.

Lindahl, A., production of a detergent powder, (P.), B., 565.

Lindau, G. See Freundlich, H.

Lindberg, E., spectroscopic measurements of M-absorption levels for the elements uranium to tungsten, A., 746. M-series of rhenium, A., 966.

Linde, O., and Teufer, H., determination of tannins in drugs, B., 264.

Linde Air Products Co. See Feild, A.L. Lindemann, H., Curtius' decomposition of acid azides, A., 78. Lindemann, H., and Cissee, H., fission of the benzisooxazole ring, A., 456.

ring openings with benz-aβ-isooxazoles, A., 942.

Lindemann, H., and Romanoff, S., ring formation from acetyloximes of aromatic o-hydroxyketones, A., 1186.

Lindemann, M. See Wieninger, F. M.

Linden, Maria (Gräfin) von, materials for treatment of wounds, (P.), B., 699. Linden, T. van der, syrup filtration in making white sugar using

kieselguhr, B., 617. special case of corrosion in cane-sugar factory, B., 952.

Lindenmaier, W. See Fiehter, F.

Linder, G. C. See Fraser, R. R.

Linderström-Lang, K., intestinal erepsin, A., 848.

fractionation of casein, A., 1093.

relation between sizes of ions and salting-out of quinol and quinone, A., 1139.

Linderström-Lang, K., and Sato, Masakaszu, hydrolysis of glycylglycine, alanylglycine, and leucylglycine by intestinal and malt peptidases, A., 1339.

Linderström-Lang, K. See also Mill, C. K.

Lindford, H. See Levine, A. A. Lindgren, H. O., and De Laval Separator Co., conservation of centrifuged liquids, (P.), B., 499.

Lindhard, P. T., and Smidth & Co., F. L., dryer, (P.), B., 701 Lindhorst, H., hardening of iron, mild steel, and iron alloys, (P.), B., 176.

Lindman, E. I., manufacture of porous clinker-like materials, (P.), B., 325.

Lindmayer, E., analysis and classification of regenerates [reclaimed rubber], B., 181.

vulcanisation and structure of rubber, B., 294.

Lindner, A. See Boie, H.
Lindner, H. See Heiduschka, A.
Lindner, J. titration vessel with side container to avoid overtitration, A., 44.

determination of hydroxide and carbonate in solutions, B., 895. Lindner, J., [with Brugger, O., Jenkner, A., and Tschemernigg, L.], halogenotolylphosphines, A., 1470.

Lindner, J., and Haslwanter, F., influence of time of outflow and subsequent drainage on buretto measurements, A., 1033.

Lindner, J., and Strecker, M., halogenonaphthylphosphines and naphthylphosphinic acids, A., 1470.

Lindner, K., production and use of cleaning, emulsifying, and wetting agents, (P.), B., 708.

Lindner, P., fermentation of cane-sugar, glucose, and fructose, (P.), B., 108.

influence of alcohol vapour and ammonia on the growth of yeast and fungi, B., 696.

Lindow, C. W., Elvehjem, C. A., and Peterson, W. H. [with Howe, H. E.], copper content of plant and animal foods, A.,

Lindow, C. W. See also Elvehjem, C. A. Lindquist, B. W. See Surface Combustion Co.

Lindsay, E. M., spectrum of the [solar] corona, A., 967. Lindsay, G. A., and Voorhees, H. R., K X-ray absorption edge of iron, A., 123. Lindsay, G. A. See also Voorhees, H. R.

Lindsay, J. See Blakeborough, R. A.

Lindsay, W. J. Seo Du Pont de Nemours & Co., E. I.

Lindsey, E. E., apparatus for treating somi-solids and liquids, (P.), B., 498.

Lindström, T. H. See Sandqvist, H.

Lindvart, J. J. See Squire, A. J.

Line, A. J., aluminium solder, (P.), B., 1020\*.

Lineham, R. A. See Brit. United Shoe Machinery Co., Ltd.

Linehan, R. E. See Whitmore, W. F. Lineken, E. E., and Burrows, G. H., equilibrium in aqueous solution between ammonium acetate, acetamide, and water, A.,

Linen Industry Research Association, and Matthew, J. A., [mechanical] preparation of flax, hemp, and like fibrous materials for spinning, (P.), B., 555. Linford, H. Seo Levine, A. A.

Ling, E. R. See Cranfield, H. T. Ling, H. W. See Burn, J. H. Ling, S. M. Seo Wu, H.

Linge, R. A. van, simple viscosimeter, A., 783.

Lingen, S. van der, absorption spectrum of fluorspar, A., 488.

Linhard, M. See Birckenbach, L.

Linhorst, E. F., determination of vapour densities at the ordinary temperature, A., 636.

 Link, J. See Meisenheimer, J.
 Link, K. P., composition of corn (Zea mais) seedlings. I. Isolation of xylan and cellulose from cell walls. II. Isolation of a dextrin similar to the tribexosan obtained by thermal depolymerisation of potato starch, B., 794.

Link, K. P., Angell, H. R., and Walker, J. C., isolation of protocatechuic acid from pigmented onion scales; significance in relation to resistance to disease, A., 613.

Link, L., Amis, M. B., and Standard Oil Development Co., purifying hydrocarbon oils, (P.), B., 770.

Link-Belt Co. See Tark, M. B. Linneweh, F. See Hoppe-Seyler, F. A.

Linneweh, W., [fate of] y-butyrobetaine, crotonobetaine, and carnitine in animal metabolism, A., 598.

carnitine, erotonobetaine, and y-butyrobetaine in putrefaction, A., 608.

carnitine, A., 686. Linneweh, W., Keil, A. W., and Hoppe-Seyler, F. A., constitution

of anserine, A., 944.

Linneweh, W. See also Hoppe-Seyler, F. A.

Linnik, W., diffraction of X-rays by a two-dimensional crystal lattice, A., 492.

scattering of X-radiation by two-dimensional gratings, A., 1130. Linnmann, W., jun., apparatus for separating benzol from waste water, (P.), B., 771.

Linoleum Manufacturing Co., Ltd., and Godfrey, A. A., manufacture of linoleum or like material, (P.), B., 786.

Linsbauer, A., and Vašátko, J., laboratory apparatus for testing

filtering and decolorising media, B., 5. Linschoten, J. L., calculation of the conductivity of water, A., 512.

Linsir, H. See Klein, G. Linstead, R. P. See Eccott, E. N., Kandlah, A., and Kon, G. A. R. Lint, H. See I. G. Farbenind. A.-G.

Lintzel, W., action of active iron oxido en blood formation and

growth of white rats, A., 1103.
metabolism of iron. IV. Iron in urine. V. Iron requirement of man, A., 1486.

Lintzel, W., and Radeff, T., formation of hamatin from carboxyand oxy-hæmoglobin by dilute acids, A., 338.

Liotta, D., uric acid of the blood, A., 1476.

Lipin, N. V., representation of binary fusion curves by a general expression, A., 130.

fusion curves in a special co-ordinate system, A., 130.

one of Kurnakov's problems, A., 130.

Lipman, C. B., Gordon, A., and University of California, impregnation of wood with substances toxic to animal and bacterial life and fungus growths, (P.), B., 357.

Lipmann, F., mechanism of fluoride inhibition and the dissociation curve of fluor-methæmoglobin, A., 607.

Lipp, J. W., substitutes for lead arsenate as a soil insecticide, B., 1048.

Lipp, P., and Holl, M., problem of addition in the camphene

Lipp, P., and Quaedvlieg, M., camphenes acylated in the  $\omega$ -position, A., 1308.

Lipp, P., and Seeles, H., preparation of 2-phenylpyrroline, A., 1311.

Lippieh, F., determination of formaldehyde, A., 460.
applications of the nitrile method. I. Fixation of hydrocyanic acid by protein, determination of formaldehyde in presence of pure proteins, and quantitative relationship between formaldehyde and protein, A., 460.

applications of the nitrile method. III. The cyanide and formaldehydo values of sugar and their analytical value, B., 412.

applications of the nitrile method. II. Action of hydrocyanic acid on milk and its analytical value, B., 414. applications of the nitrile method. IV. Significance of the

hydrocyanio acid number in the analysis of mixtures of sugars; determination of sugars in marmalade, B., 449.

Lippmann, E. von. See Bergmann, M.
Lipschitz, W., significance of the "internal cycle" for crystalloids, especially the iodine ion, A., 1485.

Lipschutz, A. See Veshnjakov, S. Lipschutz, E. W., and Brooklyn Scientific Products Co., Inc., medicinal preparation, (P.), B., 661. Lipscomb, A. G., attachment for bottles used for storage of

standard solutions, A., 167.

Lipscomb, G. J., filter element, (P.), B., 702.

Lipsey, G. See Poe, C. F.

Liquid Measurements, Ltd., and Hammond, F., apparatus for separating impurities from liquid stored in tanks, (P.), B., 1001. Lischkevitsch, M. J., and Prizemina, S. P., enzyme content of seeds of different sources, A., 1345.

Lischkevitsch, M. J. See also Ivanov, N. N. Liška, J., oxamide, a reagent for nickel, A., 1260.

Lissizyn, M., physico-chemical properties of protein, A., 836. List, F. See Moser, L.

Lithgow, J., dyeing jigs, etc., (P.), B., 775. Litmo Adhesive & Products Co. See Hoche, A.

Little, B. P. See Pike, R. D.

Little, D. G. See Assoc. Electrical Industries, Ltd.

Little, N. See Gerlach, W. Littleford, J. W. See Nutter, E. H. Littleton, J. T., jun., and Corning Glass Works, refractory product,

(P.), B., 941

Littwin, W. See Brüche, E. Litvinov, N., and Litvinov, V., dielectric constant of ethyl ether

in the critical state, A., 1128.

Litrinov, V. See Litvinov, N.

Litzow, K. See Gehlhoff, G.

Liu, S. K., regulation of the hydrogen-ion concentration of the blood. VIII. Effect of acids, bases, and other toxic substances

on the acid-base equilibrium of the blood, A., 846.

Liu, S. K., and Krüger, R., regulation of the hydrogen-ion concentration of the blood. III. Effect of strychnine on the acid-base equilibrium. IV. Action of strychnine on the blood. VI. Effect of synthalin on the acid-base equilibrium. VII. Respiratory regulation, A., 846. Livens, G. H. See Bradshaw, I.

Liversedge, S. C., gravimetric electrodeposition of metals and its application to pharmaceutical chemicals, B., 855.

Livingood, J. J., are spectrum of platinum, A., 1118. Livingston, J. C., detection of indigosols on the fibre, B., 751. Livingston, R., catalytic decomposition of hydrogen peroxide in an acid chlorine-chloride solution. II. Interpretation of the rate measurements in concentrated solution, A., 150.

all-glass circulating pump for gases, A., 903.

Livingstone, C. J., and Gruse, W. A., carbon deposits from lubricating oils; experiments with heavy-duty engines, B.,

Livingstone, H. A., pulverisation and separation of cereals, minerals, etc., (P.), B., 838.
Livschitz, A. I. See Kharit, A. V.

Livsey, H., Holden, G. E., and Worrall, Ltd., J., & J. M., treatment of fibres and fabrics, (P.), B., 679.

Ljubarski, E., cause of the low m. p. of colophony obtained by extraction, B., 219.

Ljubimova-Kremleva, M. See Engelhardt, W.

Ljubuschin, A. A., effect of  $p_{\rm H}$  on the action of certain poisons,

Ljunggren, G., and Elmqvist, R., simple thermionic valve (audion) potentiometer for  $p_H$  determinations, A., 1416.

Lloyd, A. H. Seo Herbert, (Sir) A.

Lloyd, D. J., influence of volume in swelling, A., 1143.

Lloyd, D. J. See also Pickard, R. H.
Lloyd, F. E., and Moravek, V., periodic precipitation, A., 507.
Lloyd, G. F., and Spectrum Dyes Proprietary, Ltd., dyeing of fabric, (P.), B., 811. Lloyd, H. J., apparatus for mixing liquids, (P.), B., 80.

Lloyd, L. L., and Priestley, E., analysis of union materials [containing artificial silks], B., 712. Lloyd, R. L., and Dwight & Lloyd Metallurg. Co., smelting of

zinc ores, (P.), B., 479.

Lloyd, S. J., alkaline electrolytic iron, B., 438. Lloyd, William Vernon, overpotential of bismuth in acid solutions, A., 1241.

Lloyd, William Vivian. See Lowry, T. M. Lobeck, J. See Wahl, A.

Lobinger, K. See Kraut, H., and Willstätter, R.

Lobley, A. G., and Betts, C. L., creep of 80:20 nickel-chromium alloy at high temperatures, B., 855.

Lobley, A. G. See also Birmingham Electric Furnaces, Ltd. Locher, E., determination of tar-forming value of transformer and switch oils, B., 631.

Locher, F. See Soc. of Chem. Ind. in Basle.
Lock, G., "oxidising" action of alkalis. I., A., 67.
"oxidising" action of alkalis. II. Aromatic hydroxyaldehydes, A., 814.

Lock, G. See also Bock, F. Locke, A., and Main, E. R., diphtheria toxin, A., 474.

Lockeman, G., "Haff disease," A., 717.

Lockwood, A. A., means for concentrating or separating solid substances, (P.), B., 838.

Locquin, R., and Cherchez, V., derivatives of hydantoin-3-acetic acid, A., 330.

Locquin, R., and Heilmann, R., pyrazolines, A., 1183.

action of potassium cyanate in acid medium on pyrazolines; pyrazolinecarbamides, A., 1183. constitution of "Scholtz' base," A., 1183.

Locsin, C. L., testing various quantities of "ammophos" 20:20 (or 16:5% N and 20% P<sub>2</sub>O<sub>8</sub>), B., 409.

Locsin, C. L., Tabhan, F., and Punzalan, E., comparing various quantities of mixture of "ammophos" and ammonium sulphato plus filler to make a 10:10 formula (10% N and 10%  $\hat{P}_zO_5$ ),

Loeb, L. B., recombination of gaseous ions, A., 862.

mechanism of spark discharge in air at the ordinary pressure, A., 1354.

attachment of electrons to neutral molecules, A., 1359.

Loeb, L. B., and Dyk, K., effects of an homologous series of amines on the mobilities of ions in hydrogen gas, A., 483. Loeb, L. B. See also Loeb, L. L.

Loeb, L. F., chemical nature of allergic substances, A., 348. Loeb, L. L., and Loeb, L. B., existence of radioactive recoil ions of high mobility, A., 737.

Löbbecke, C., regulation of furnaces working with different fuels, (P.), B., 968.

Löblein, F., the accelerator [of vulcanisation] "Tuads" and its substitutes, B., 294. Loebmann, S. See Freundlich, H.

Loeff, J. A. van der. See Grijns, G. Löffler, H., determination of hygroscopic moisture in coal, B., 545. Löffler, S., [distribution of fuel and air to] furnaces for pulverised

coal, (P.), B., 461. Loehr, O. See I. G. Farbenind. A.-G.

Löhrmann, V., relation of moisture content of wool to that of air, B., 468.

Loehwing, W. F., amino-acid synthesis in plants, A., 222.

physico-chemical effects of organic soil colloids, B., 297. calcium, potassium, and iron balance in certain crop plants in relation to their metabolism, B., 532,

Loele, W., intracellular oxidising substances, A., 1341.

relation between oxidases, vital staining, post-mortal staining, and morphology of cells, A., 1341.
relation of oxidising substances in bacteria and yeasts to cellular

oxidases, A., 1341

Lönnqvist, C., possibility of an experimental proof of the reciprocal annihilation of electrons and protons, A., 973.

Loeper, M., Decourt, J., and Lesure, A., deposition of sulphur in the skin after extirpation of the adrenals, A., 343.

Loeper, M., Lemaire, A., and Lesure, A., solvent action of normal and pathological human serum on cholesterol, A., 88.

Löpmann, B. See Gluud, W. Loerpabel, W. See Müller, Erich.

Loertscher, W. See Koestler, G. Loesche, E. C., crushing mills, (P.), B., 664, 800.

furnace for sintering, burning, and roasting of substances, (P.), B., 999.

pulverising mill, (P.), B., 1001\*.

Loesecke, H. von, quantitative changes in chloroplast pigments in the peel of bananas during ripening, A., 1204. preparation of banana vinegar, B., 449.

banana pectin, B., 736.

Loeser, A. See Loevenich, J. Loeser, D., colloidal nature of iron scale salts, B., 376.

Loevenich, J., and Loeser, A., a-phenylfluorenoquinoline-y-carboxylic acid, A., 937.

Löw, A., and Krema, A., "oxantin" (dihydroxyacetone): relation between metabolism and blood-sugar changes, A., 1100.

Loew, C. H., and Loew Filter Co., filter, (P.), B., 1036. Löw, E., and Verein für Chemische Industrie A.-G., production of

concentrated acetate liquors from acetic acid-containing gases [from carbonisation of wood], (P.), B., 845\*.

Loew Filter Co. See Loew, C. H. Loewe, Siegfried, and Molyavko-Vyssotski, P., combination of

some narcotics with tissues rich and poor in lipins, A., 601.
cowe, Siegfried, Voss, H. E., Lange, F., and Wähner, A., sexual hormone in the urine of males, A., 358.

Loewe, Siegmund, method for obtaining a perfect high vacuum, (P.), B., 269.

manufacturing [spraying of emissive substances on to] cathodes of thermionic valves, (P.), B., 986.

Loewe, Siegmund, and Radio Corporation of America, resistor and its manufacture, (P.), B., 688. Loewen, H., benzene theory, A., 54.

solubility of sulphur in rubber, B., 29.

degree of devulcanisation and the evaluation of regenerated rubber, B., 334.

vulcanisation and constitution of rubber, B., 444.

Löwenberg, K. See Fischer, F. G.

Löwenberg, W., nature of the bactericidal agents (bactericidins) in duodenal juice, A., 608.

Löwenstein, L., electrochemical manufacture of hydrogen peroxide, B., 52.

Loewenthal, M., liquid-solid interface tension, A., 1141.

Loewi, O. See Häusler, H.

Loewy, A., and Pincussen, L., changes in the ion content of organs [of animals] exposed to irradiation and to the climate of high altitudes, A., 1335.

Löwy, O. See Müller, W. J. Lofland, E. M., manufacture of ferrous hydroxide, (P.), B., 53.

Logan, K. H., soil corrosion studies, 1927-8, B., 942

Logan, K. H., Ewing, S. P., and Yeomans, C. D., soil corrosion studies, B., 56.

Logue, P. See Booth, C. F.

Logvinova, Z. V., peat as a source of nitrogen, B., 929. Lohéac, P. See Langeron, and Paget, M.

Lohfert, H. See Rosenmund, K. W.

Lohmann, K., occurrence and decomposition of pyrophosphate in cells. I., A., 208.

occurrence and decomposition of pyrophosphate in cells. II. Amount of readily hydrolysable phosphorus compounds in animal and plant cells. III. Physiological behaviour of pyrophosphate, A., 347.

pyrophosphate fraction in muscle, A., 1098. Lohmann, K. See also Meyerhof, O.

Loiseau, J., X-ray spectrography of copper and some brasses, A., 17.

Loiseleur, J., modifications of collagenic substances by radiation from radioactive bodies, A., 896.

polarisation of membranes due to metallic plates, A., 1003. Loke, W. A., reduction of ores and manufacture of metals [iron] and alloys, (P.), B., 479.

Lombroso, U., fate of glycogen injected into the blood circulation of normal and depancreatised dogs, A., 597.

Lommen, F. W., and Carbide & Carbon Chemicals Corporation,

manufacture of olefine alcohols, (P.), B., 511.

London, E. S., Kotschnev, N., Cholopov, A., Abaschidze, T. S., and Alexandry, A. K., formation and fate of urea in the dog, and the relation between urea formation and the retention of amino-acid substances and ammonia in the liver, A., 95.

London, E. S. See also Levene, P. A.

London, F., quantum-mechanical explanation of activation, A., 1397.

London, F. See also Kallmann, H. Long, C. W. See Haworth, W. N. Long, J. S. See Chamberlin, D. S.

Long, M. L. See Bell, M., and Bischoff, E.

Long, R. A., and Atlas Powder Co., blasting explosive, (P.), B., 38. Longhi, C., treating materials [tars, etc.] in liquid state electrochemically, (P.), B., 805\*.

Longinescn, G. G., and Chaborski, G., molecular association and molar concentration, A., 248.

Longinescu, I. N., extension of Avogadro's law; application to the liquid state, A., 991. relation between the internal pressure of fluids and some

physico-chemical properties, A., 992. Longinov, V., and Prianischnikov, A., still heads and laboratory

rectification columns, A., 1261. Longsworth, L. G. See Cady, H. P.

Longuinov, V., and Margoliss, (Mile.) E., aliphatic [open-chain] hydroterpenes, A., 538.

Lonsdale,  $\hat{K}$ ., structure of the benzene ring, A., 17.

symmetry of naphthalene, A., 307

X-ray evidence on the structure of the benzene nucleus, A., 750. structure of the benzene ring in hexamethylbenzene, A., 750.

Lonsdale, J. T., dipyrite and associated contact minerals from the Franklin mountains of Texas, A., 787.

Loomis, A.L. See Richards, W.T. Loomis, C.C., MacDonald, A.D., and Colloidal Lime Plaster Corporation, manufacture of quick-setting lime products, (P.), B., 1017.

Loomis, C. C. See also Jones, L. C.

Loomis, E. G., purification of camphor and similar volatile substances, (P.), B., 200.
Loomis, F. W., and Nile, S. W., jun., red band system of sodium,

Loomis, N. E., and Standard Oil Development Co., preparation of hydrocarbon products, (P.), B., 197.

Loomis, N. E. See also Lewis, W. K., and Piroomov, R. S. Loomis, W. E. See Appleman, C. O. Loon, J. van, and Novadel-Agene Corporation, fermentation process, (P.), B., 867\*. Loon, J. van. See also Steger, A.

Looser, J. See Rhenania-Kunheim Ver. Chem. Fabr. A.-G.

Lopriore, G., catalase reaction in pollen, A., 105.

Lora, M., and Tamayo, colloidal sulphur, A., 877.

Lorah, J. R., Tartar, H. V., and Wood, (Miss) L., basic phosphate of calcium and of strontium and the adsorption of calcium hydroxide by basic calcium phosphate and by tricalcium phosphate, A., 777.

Lorah, J. R. See also Tartar, H. V. Lord, H. D. See Bramley, A.

Lord, J. O. See Blake, F. C.

Lord, S. S., and Tootal Broadhurst Lee Co., Ltd., process and apparatus for mercerising textile fibres [in the form of sliver], (P.), B., 51.

Lorentz, E. See Herz, W. Lorenz, A. See Riesz, E.

Lorenz, C. F., and Westinghouse Lamp Co., refractory [metal] article, (P.), B., 399.

Lorenz, E., dependence of the intensity of X-ray spectral lines on the tube voltage, with special reference to the K series of aluminium, A., 14. Lorenz, L. See Herz, W.

Lorenz, R., distribution law. I. Ideal distribution law expressed in molar fractions. II. Distribution law for condensed systems, A., 388.

Lorenz, R., determination of forces of attraction from chemical equilibria, A., 499.

calculation of van der Waals' a constants from Dühring's specific factors derived from van Laar's formula for the vapour-pressure curve, A., 648.

influence of mixtures of electrolytes on the flocculation curve of rosin, B., 690.

Lorenz, R., and Erbe, F., distribution equilibrium of silver between lead and aluminium; test of the distribution law for condensed systems, A., 1230.

Lorenz, R., and Hering, M., equilibria between molten metals and salts. XII. Displacement of the equilibrium Cd+ PbCl<sub>2</sub> \Rightharpoonup Pb+CdCl<sub>2</sub> by additions to the metal phase, A., 266.

equilibria between molten metals and salts. XIII. and XIV. Displacement of the equilibrium in the reaction  $Cd+PbCl_2 \rightleftharpoons$ Pb+CdCl<sub>2</sub> by additions to the salt phase and both phases simultaneously, A., 400.

equilibria between molten metals and salts. XV. Displacement of the equivalence point in the equilibrium  $\operatorname{Cd}_+$   $\operatorname{PbCl}_2 \rightleftharpoons \operatorname{Pb} + \operatorname{CdCl}_2$ , A., 400. Lorenz, R., and Schulz, G. [with Erbe, F.], partition law. III.

Application of van Laar's partition law to a condensed system derived from molten metals, A., 639.

Lorenz, R., and Schulz, G. [with Hering, M., Wolff, P., and Silberstein, J.], equilibria between molten metals and salts. XVI. Disturbances of equilibria by additions, and their calculation by the new mass action law, A., 510.

Lorenz, R., and Velde, H., E.M.F. of some molten salt cells, A., 1241.

Lorenz, R., and Winzer, R., phase diagram of calcium-sodium, A., 650.

equilibrium between molten metals and salts. XVII. Calcium and sodium and their chlorides, A., 1012.

XVIII. Equiequilibria between molten metals and salts. librium between calcium and sodium and their chlorides when lead and antimony are present in the metal phases, A., 1238.

solubility of sodium and calcium in their chlorides and in chloride mixtures, A., 1229.

Lorenz, R, and Woolcock, J, decomposition pressures of nitrides, A., 29, 266.

Lorenz, A.-G., C., and Hessenbruch, W., apparatus for determining gas content of solid bodies, (P.), B., 627.

Lorenzen, G., removal of sulphur compounds from gases and recovery of the sulphur, B., 766.

Lorenzini, G., colloidal lead in toxicological tests, A., 1337.

Loring, F. H., absolute zero of temperature; specific heats of gases; and deductions respecting quanta, A., 252. mass numbers of the elements; element formation, A., 971.

Loring, R. A. See Green, J. B.

Lormand, C., determination of chloral in chloral syrup, B., 301. Lortie, L., compounds of tervalent cerium salts and thorium salts with sodium carbonate (sodium cericarbonate and thoricarbonatc), A., 524.

Losana, L., self-deforming zinc alloys, B., 559.

Losana, L., and Reggiani, G., corrosion of steel at high temper atures, B., 210.

Losowoy, A. See Petrenko-Kritschenko, P.

Loth, O. See Trautz, M. Loth, W. A. [apparatus for] manufacture of cast [metal] articles, (P.), B., 726.

Lotichius, J. See Rossem, A. van.

Lottermoser, A., observations and measurements of the photosensitivity of silver halide sols, B., 871. Lottermoser, A., [with Eichler, W.], catalysis of hydrogen per-

oxide by tungstic oxide, A., 1400.

Lottermoser, A., and Calantar, N., technical destruction methods of crude oil emulsions, B., 631.

colloid-chemical factors in the formation and separation of crude oil emulsions, B., 767.

Lottermoser, A., and Matthaes, W., setting of gelatin sols, A., 646. effect of potassium alum on gelatin, A., 1382.

Lough, S. A. Sec Lewis, H. B.

Lougovoy, B. N., and Chadeloid Chemical Co., paint and varnish remover containing an alkali-metal benzoate as thickening agent, (P.), B., 255.

Lougovoy, B. N., and Ellis-Foster Co., reducing the viscosity of cellulose ethers, (P.), B., 892.

Louisville Cement Co., method and apparatus for burning lime and natural cement, (P.), B., 357.

Louth, M. E. See Young, A. W. Lovatt, A. E. See Broad, W. R., and Lovatt & Lovatt, Ltd.

Lovatt & Lovatt, Ltd., and Lovatt, A. E., pottery decoration, (P.), B., 284.

Love, R. B. See Leonard, C. S. Lovejoy, W. H., algoe control [in water purification] by creating turbidity at Louisville, Ky., B., 152.

Lovell, H. W. See Edmunds, C. W.

Loven, O. H., cadmium plating, B., 780, 820.

Lovyagin, Y. N. See Pigulevski, G. V.

Low, A. M., soap [cakes, etc. with antiseptic cores], (P.), B., 785.

Low, F. S., tanning, (P.), B., 904. Low, W. H. See Black, J. C.

Low Temperature Carbonisation, Ltd., and Parker, C. H., retorts for the distillation of solid carbonaceous substances, (P.), B., 44, 119,

Lowater, F., titanium oxide bands in the orange, red, and infrared region, A., 625.

band systems of titanium oxide, A., 1206.

Lowe, E. W. See Rising, M. M.

Lowe, H., poisoning by bittersweet (Solanum dulcamara), A., 601. Lowe, R. E., and Doherty Research Co., bonded refractory, (P.), B., 172.

Lowe, S. P., and Channing, R. H., flotation concentration [of ores], (P.), B., 900. Lowe, S. P. See also Phelan, R. E.

Lowenstein, L., recent developments in the electrochemical production of hydrogen peroxide, B., 1013.

Lowndes, J. See Plimmer, R. H. A. Lowry, C. D., jun. See Egloff, G.

Lowry, H. H., significance of the hydrogen content of charcoals, B., 929.

Lowry, H. H., and Western Electric Co., Inc., preparation of granular carbon, (P.), B., 932.

Lowry, T. M., configuration of quadrivalent atoms, A., 629. Lowry, T. M., and Gilbert, F. L., magnetic properties in relation

to chemical constitution, A., 127. valency. XIII. Molecular structure of the quadrivalent deriv-

atives of tellurium, A., 1218. Lowry, T. M., and Jessop, G., chlorides of sulphur. II. Molecular

extinction coefficients, A., 978.

Lowry, T. M., and Lloyd, W. V., nicotine and its derivatives. I.

Molecular extinction coefficients, A., 944.

nicotine and its derivatives. II. Optical rotatory power and rotatory dispersion, A., 1186.

Lowry, T. M., Moureu, H., and MacConkey, C. A. H., dynamic isomerism. XXVIII. Absorption spectra of the ketonic and cnolic forms of an a-diketone, A., 189.

Lowry, T. M., and Nasini, A. G., molecular dimensions of organic

compounds. I. General considerations, A., 637.
owry, T. M., and Smith, Gilbert F., mutarotation of galactose, Lowry, A., 272.

Lowry, T. M., and Vernon, M. A., electronic theory of valency. VII. Etch figures of sylvine, A., 744.

Lowry, T. M., and Wilson, G. L., determination of the catalytic coefficient of the hydroxyl ion in the mutarotation of dextrose and lactose, A., 35.

Lowry, T. M. See also Gilbert, F. L., and Hague, E. N.

Lowson, W. See Dawson, H. M. Lowy, A. See Davidson, J. M., Hubbuch, L. H., McLure, R. E.,

Loy, G. S., pulverising apparatus for solid fuels, etc., (P.), B., 667.

Loyarte, R. G., magnetic permeability of nickel in feeble oscil-

latory fields, A., 989.
Loyarte, R. G., and Williams, A. T., absorption spectra of the vapours of tin, silver, and manganese between 5500 and 2140 Å., A., 366.

absorption spectrum of nickel vapour; new multiplet of nickel, A., 1351.

Loyd, R. W., and Moye, B. W., separating metallic [zinc-lead sulphide] ores [by flotation], (P.), B., 900.

Lozanić, S. M., numerical regularities in the atomic weights of elements, A., 233. Lu, K. C., glass-tank refractories and their chemical relationship

with the molten glass, B., 518. modification of the Kjeldahl trap, A., 1034, 1161.

modification of Hempel gas pipette, B., 457.

Lucas, II. J., electron displacement in carbon compounds. Addition of hydrogen chloride to y-ethyl-\( \Delta \beta\)-pentene, A., 290. Lucas, H. J., and Young, W. G., condensation of acetaldehyde with methylmalonic ester; methylations with methyl bromide, A., 1166.

Lucas, H. J. See also Bibb, C. H., Valby, E. P., and Young, W. G.

Lucas, O. D., and Vickers, Ltd., treatment of flax, (P.), B., 1011\*. Lucas, O. D. See also Vickers, Ltd.

Lucas, P. G. See Cowper-Coles, S. O.

Lucas, R., determination of water in calcium nitrate, B., 127. Lucas, R., and Grassner, F., micro-analysis and technical methods of investigation, A., 161.

Lucas, R., and Hirschberger, W., determination of total nitrogen in urea-nitrate mixtures, B., 259.

Lucasse, W. W., activity coefficients of cadmium chloride and bromide, A., 1386.

transport numbers of cadmium chloride and bromide, A., 1390. Luce, L. R., influence of the curvature of solids on chemical and electrolytic phenomena, A., 658. Luce, W. See Hoffa, E.

Luchsinger, R. See Rossier, P. H.

Lucius, F., determination of lævulose and dextrose in sweet wines, B., 34.

Lucius, F. See also Nottbohm, F. E.

Luck, J. M., and Keeler, L., blood chemistry of rattlesnakes,

Luck, J. M. See also Allen, F. W., and Speak, H. B. Luck, K. von, and Meyer, H. J., rapid determination of total hardness [of water] by separate determination of lime and magnesia hardness, B., 114.

Lucké, B., and McCutcheon, M., effect of valency of ions on cellular permeability to water, A., 599.

Lucke, M. See also Mudd, S.

Luckenbach, R., flotation oil, (P.), B., 524, 805.

Luckhaus, E., treatment of skins or hides with tanning or other liquids, (P.), B., 950.

Luckiesh, M., spectral reflectances of common materials in the

ultra-violet region, A., 967.

Luckmann, H. See Thiel, A.

Luckow, C., is the volume of a saccharine liquid altered in fermentation?, B., 954.

Luckow, C. See also Wüstenfeld, H. Luczak, E. See Jakob, W. F.

Ludeman, H. See Muskat, E.

Ludford, R. J., vital staining of normal and malignant cells. II. Staining of malignant tumours with trypan-blue, A., 718

Ludlam, E. B., band spectrum of chlorine or hydrogen chloride, A., 118, 375.

Ludlam, E. B., Reid, H. G., and Soutar, G. S., hydrogen-chlorine flame, A., 897.

Ludlam, E. B. See also Armour, R. W., and Mooney, R. B. Ludloff, H., quantum mechanics of the molecule, A., 863.

derivation of the chemical equilibrium constant, A., 873. equilibrium in a polyatomic gas according to the new statistics,

A., 1209. Ludlum Steel Co. See Armstrong, P. A. E., Batcheller, H. G.,

De Fries, H. A., and De Fries, R. P. Ludolph, P. C. See Knipp, C. T. Ludwig, E. See Pauly, H.

Ludwig, H., formation of complex compounds in the treatment of chronic lead and mercury poisoning, A., 1196. Ludwig, H. See also Boedecker, F.

Lüde, K. von. See Eucken, A.

Lüdecke, K., production of trimethylamineglycol monoborate, (P.), B., 113.

Lüdecke, K., and Lüdecke, N., production of glycerin, (P.), B.,

Lüdecke, N. See Lüdecke, K.

Lüder, E. See Rostosky, L. Lüdke, W, influence of liquids on manufactured cellulose hydrate, B., 389.

Lüdtke, M., agar, A., 1347. inulin phosphate, A., 1427.

Lüers, H., cold and warm malting, B., 107.

Lüers, H., and Malsch, L., alteration of hemicellulose-splitting enzymes during flooring and kilning [of malt], B., 490. phosphatases of malt, B., 618.

proteolytic enzymes of malt, B., 696 Lüers, H., and Wieninger, F., [starch] liquefying and saccharifying powers of [German] malts of the 1928 harvest, B., 490.

Lühder, E., potato flakes as distillery raw material, B., 734.

Lühder, E., and Kilp, W., distillation of high-percentage alcohol, B., 108.

reproduction of yeast in open, loosely covered, and closed fermentation vessels, B., 533.

Lühder, E., and Lampe, B., defective attenuation of the mash, B., 34.

Lühr, F. See Weigert, F.

Lührs, A. See Remy, H. Lüke, J. Sec Fricke, R.

Lüning, O., and Beyer, E., detection of regenerated preserved peas, B., 621.

Luense, F. H., separators [for solids and liquids], (P.), B., 268.

Lüppo-Cramer, Herschel effect, A., 276. intermediate regressions, A., 408.

photochemistry of silver iodide, A., 1151. bleaching action of desensitisers, B., 417.

distribution of silver iodide in silver bromide, B., 798.

Lüscher, E., and Elektrizitätswerk Lonza, manufacture of crotonaldehyde from acetaldehyde and aldol, (P.), B., 47\*. Lüscher, E., Steiger, H., and Elektricitätswerk Lonza, production of metaldehyde, (P.), B., 47\*.

Lüttringhaus, A., Kačer, F., and General Aniline Works, Inc., production of ketones of the anthraquinone series, (P.), B., 936\*.

Lüttringhaus, A., and Neresheimer, H. [with Wolff, Hugo, and Emmer, H.], benzanthrone, A., 1304. Lüttringhaus, A. See also I. G. Parbenind, A.-G., and Windaus, A.

Luty, W., types of red lead, B., 333.

Lütz, J., vertical coking oven, (P.), B., 314\*. Luft, F. See Fischer, J.

Lugovkin, B. P., volumetric determination of phenols by means of glycerin in distillation tars of brown coals, B., 463.

Lugovkin, B. P. Sec also Postovski, I. J.

Luis, E. M. Sce McKenzie, A.

Lukaes, T., trypsin secretion of infants, A., 210. Lukanin, A. A. See Tronov, B. V.

Lukas, J., and Jilek, A., detection of vanadium and cerium by hydrogen peroxide, A., 532, 1260.

Lukas, J. See also Hanus, J., and Jilek, A.

Lukens, A. R., and Richardson Co., de-inking paper, (P.), B., 14. Lukens, H. S., and Heuer, R. P., removal of copper oxide from copper, (P.), B., 330.

Lukens, H. S., and Solidon Products, Inc., manufacture of Sorel cement, (P.), B., 853. Lukens, H. S. Sce also Strook, L. IV.

Lukeš, R., alkylated pyrrolones; synthesis of γ-ketonic and of fatty acids, A., 576.

derivatives of homolævulic acid, A., 1165.

Lukes, R., and Fragner, J., nitration of bromoanilines in sulphuric acid, A., 804.

Lukeš, R., and Prelog, V., arylamides of lævulic acid, A., 824. action of aromatic magnesium compounds on methylsuccinimide; synthesis of 2:5-diphenyl-1-methylpyrrole, A., 935\*.

Lukirsky, P., polarisation from the Compton effect, A., 492. Lukirsky, P. See also Dobronravov, N. Lukomsky, M. E. See Lewitsky, M. A.

Lulek, R. N. See Du Pont de Nemours & Co., E. I.

Lumb, A., and Lumb, L., filter for straining and clarifying such portions of the gases, from furnace flues, etc., as may be desired for analysis, etc., (P.), B., 500. apparatus for automatically indicating and recording the per-

centage of carbon dioxide gas contained in the combustion gases of furnace flues, etc., (P.), B., 803.

Lumb, L. See Lumb, A.

Lumen Bearing Co. Sce Bierbaum, C. H.

Lumière, A., structure of colloids, A., 392.

stability of humours, its causes, effects, and remedies, A., 1008. Lumière, A., Grange, R. H., and Malaval, R.,  $p_{\rm H}$  of arterial and venous blood, A., 338.

Lumière, A., Lumière, L., and Seyewetz, A., development of images with fine grain, B., 340.

Lumière, L. See Lumière, A.

Lund, O. See Hägglund, E. Lundberg, J. J. V. See Andreasen, A. H. M.

Lunde, G., crystalline form of calcium carbonate in otoliths of Gadus morrhua, A., 590.

biochemistry and geochemistry of iodine; ctiology and prophylaxis of endemic goitre, A., 595.

Lunde, G., and Closs, K., iodine liberator from Laminaria, A., 1346.

Lunde, G., Closs, K., and Böe, J., microchemical determination of

iodine [in organic substances], A., 1323. Lunde, C., Closs, K., Haaland, H., and Madsen, S. O., iodine content of Norwegian fish and fish products, B., 908.

Lunde, G., Closs, K., and Pedersen, O. C., iodine metabolism. III. Blood-iodide content in primary thyrotoxicosis, A., 595.

Lunde, G., Closs, K., and Wülfert, K., iodine metabolism. II. Iodine content of normal and pathological thyroid glands, A.,

Lundeen, E. P., and Willard Storage Battery Co., electrolytic rectifier, (P.), B., 1021.
Lundegårdh, H., carbon dioxide assimilation of the sugar beet,

A., 105.

influence on the development of plants of zinc and lead precipitated on the soil from factory fumes, B., 31.

Lundell,  $\hat{G}$ . E. F., and Knowles, H. B., use of 8-hydroxyquinoline in separations of aluminium, A., 1260. analysis of bauxite and of refractories of high alumina content,

В., 19.

analysis of fluorspar, B., 471.

Lundell, G. E. F. See also Hoffman, J. I. Lundgren, K. T. R., apparatus for [comparing the rate of] separation of particles suspended in a liquid, (P.), B., 964.

[centrifugal] apparatus for precipitation of particles suspended in liquids, (P.), B., 965\*.

Lundin,  $\hat{H}$ ., oxidation of dextrose and glycine by means of alkaline copper solutions, A., 682.

Lundin, H., and Ellburg, J., rapid determination of nitrogen by

Kjeldahl's method, B., 596.

Lundin, H., and Scharf, R., action of sodium chloride on normal, pregnant, and partly nephrectomised animals. I. Chlorine and water metabolism. II. Influence of sodium chlorido on the inorganic constituents of the blood, A., 599.

Lundsgaard, C., Gram, C. N. J., Holboll, S. A., and Rud, E., polarimetric determination of small amounts of dextrose, A., 91.

Lunge, G. H. See Briner, E.

Lunkiewicz, (Mlle.) J. See Humnicki, V. Lunn, A. C., and Senior, J. K., isomerism and configuration, A., 1036.

Lunn, R. W., pigment reinforcement [of rubber], B., 445.

Lunt, H. A., vertical distribution of soil bases and acidity in some Illinois soils, B., 830.

Lunt, R. W., and Mumford, L. S., decomposition of carbon monoxide in the silent electric discharge. III., A., 1150. Lurgi-Gesellschaft für Wärmetechnik m.b.H., adsorption media,

(P.), B., 8.

Luria, E., mellitic acid, A., 66.

Lusch, O. See Busch, M.

Lush, E. J. See Technical Res. Works, Ltd.

Lustig, B., and Botstiber, G., identification of fats and fat mixtures, B., 178.

identification of fats and fat mixtures. II. Clouding point and setting curves, B., 253.

Lustig, B., and Speiser, B., determination of nitrogenous constituents of urino by fractional precipitation with mercuric chloride, A., 593.

Lutenberg, C. See Kaufmann, H. P.

Luther, F., and Polysius, G., device for utilising the heat radiated from kilns, (P.), B., 305.

Luther, M. See I. G. Farbenind. A.-G.

Luther, S. L. See Bhatnagar, S. S.

Luthy Research Laboratory. See Garaca, F.

Lutz, A., and Lee, R. C., treatment of fibrous material [paper], (P.), B., 14.

Lutz, J. A. See Theis, E. R.

Lutz, L., enzymes secreted by Hymenomycetes; alkaloids and the anti-oxygenic function, A., 849.

soluble enzymes secreted by fungi; phenolic constituents of essential oils and the anti-oxygenic function, A., 1107.

soluble enzymes secreted by fungi; comparison of the anti-oxygenio power of tannin and of the phenolic constituents of essential oils, A., 1107.

Lutz, O., synthesis of optically active, substituted asparagines. I. and II., A., 1048, 1283.

Lutz, R. E., 1:6-addition of hydrogen to unsaturated 1:4-diketones, A., 1459.

Lux, A. R. See Smith, L. I.

Lux, II., syntheses of ethyl acetoacetate and malonate, A., 1041. Luxor-Film Ges.m.b.H., manufacture of photographic prints, (P.), B., 961.

Luy, P., micro-determination of hydrogen peroxide, nitrogenous compounds, and fermentation carbon dioxide; Pacchtner's ponderovolumeter, A., 109.

Luyken, W., and Bierbrauer, E., recovery of apatite from the residual slimes [of phosphatic iron ores] by flotation, B., 98. magnetic roasting of iron ores, B., 397.

relation between adsorption, wetting power, and flotation,

B., 1018. Luz, G. See Grube, G. Luzanski, N. See Hassel, O.

Lvov, A., nutrition of . Polytoma uvella, Ehrenberg (Flagella Chlamydomonadina, and the synthetical power of heterotropic protozoa; mesotropic protozoa, A., 218.

Lycan, W. H., and Adams, R.,  $\omega$ -hydroxyaliphatic acids; synthesis

of sabinic acid, A., 423. Lyche, R. T. See Rüber, C. N.

Lydén, R., affinity of hydrocarbon radicals for oxygen, A., 676.

Lykken, H. G., pulverising device, (P.), B., 306. Lymn, A. H., Bowater, N. J., and Chamber Ovens, Ltd., quenching coke by means of water, (P.), B., 349.

Lymn, A. H. See also Bowater, N. J., and Leyst, C.

Lyncker, L. von. See Agde, G.

Lynn, E. V. Sec Goodrich, F. J.

Lyon, G., apparatus for treating [seasoning] wood with ozone, (P.), B., 56\*.

Lyon, T. L., and Wilson, B. D., relations of green manure to the nitrogen of a soil, B., 106.

Lyons, C. G., and Rideal, E. K., stability of unimolecular films. I. Conditions of equilibrium. II. Mechanism of film expansion. III. Dissolution in alkaline solutions, A., 875.

Lyons, E., and Dox, A. W., identification of alkylbarbituric acids, A., 453.

Lyons, M., medicinal ointment and ite manufacture, B., 911. Lyons, R. E., and Pleasant, M. E., reaction between nitrobenzene and secondary alcohols, A., 1038.

Lyons & Co., Ltd., J., and Catlin, G. W., apparatus for separating fat or other material from gases, (P.), B., 565.

Lyth, C. J. See Stone & Co., Ltd., J.

Lythgoe, R. J., and Tansley, K., photographic method for the determination of coloured solutions with special reference to the visual purple, A., 1254.

Lytle, A. R., and Union Carbide & Carbon Research Laboratories, Inc., non-ferrous welding rod, (P.), B., 648.

M.A.G. Maschinenfabr. Akt.-Ges. Geislingen, grinding or crushing mills, (P.), B., 626.

M.O. Valve Co., Ltd., Reimann, A. L., and Ryde, J. W., manufacture of thermionic cathodes for electric discharge devices, (P.), B., 290.

M.O. Valve Co., Ltd., and Ryde, J. W., manufacture of cathodes for electric discharge tubes, (P.), B., 178.

Ma, I., decomposition of protein in fever, A., 1100.
Ma, Y. M. See Gill, A. H.
Maag, E., recovery of hydrochloric acid from waste liquors of

the fuller's earth industry, (P.), B., 54, 206.

Maan, C. J., importance of acetone and boric acid methods in the study of alleyclic 1:2-diols, A., 553.

Maan, C.J. See also Verkade, P.E.

Maas, corrosion and metal protection in gasworks' practice, B.,

Maass, O. See Hunten, K. W., and Matheson, G. L.

Mabee, H. C., report of the [Canadian] chemical laboratory division; [hydrometallurgical process for treatment of stibnite ore and recovery of metallic antimony; Eckel process for production of iron slag cement], B., 819.

McAdam, D. J., jun., corrosion of metals as affected by stress,

time, and number of cycles, B., 779.

McAdams, W. H. See Hanks, W. V.

McAfee, A. M., Roberts, G. I., and Gulf Refining Co., manufacture of aluminium chloride, (P.), B., 54.

McAlister, E. D., infra-red emission of hydrogen, A., 1349.

McAlister, E. D. See also Williams, R. J.

McAllep, W. R., combined milling and diffusion, B., 572.

McAllister, R. W. See Corson,  $\tilde{B}$ . B. Macallum, A. B., ionic mobility as a factor in influencing the distribution of potassium in living matter, A., 718.

Macallum, A. D., synthesis of aromatic arsenic compounds containing iodine, (P.), B., 150.

McAlpine, J. G., and Brigham, G. D., commercial bacteriological peptones, A., 608.

McAlpine, J. G., and Slanetz, C. A., metabolism of the Bacillus abortus-melitensis group. II. Nitrogen. III. Dextrose utilis-

McAlpine, R. K., determination of chloride in bromides, A., 782.

at. wt. of antimony from different sources, A., 971.

McAmis, A. J., Anderson, W. E., and Mendel, L. B., growth of rats on fat-free diets, A., 853.

McAnally, S. G., ageing of calcined gypsum, (P.), B., 599. McAulay, A. L., and Bastow, S. H., electrical behaviour of sur-

faces of corroding iron, A., 270.

McBain, J. W., and Harvey, C. E., transport number of aqueous acetic acid, A., 885.

McBain, J. IV., and Hay, (Miss) K., alkalinity of soap solutions

as measured by indicators, A., 649.
McBain, J. IV., Humphreys, C. IV., and Kawakami, Y., rates of saponification of commercial oils, fats, and waxes and pure

triglycerides by aqueous alkali, A., 1396. McBain, J. W., and Kistler, S. S., membranes for ultra-filtration, of graduated fineness down to molecular sieves, A., 110.

McBain, J. W., Laing, M. E., and Clark, O. E., salt error of indi-cators due to standard alkaline buffers themselves. II., A., 899. McBain, J. W., and Peaker, C. R., electrical conductivity caused

by insoluble unimolecular films of fatty acid on water, A., 1378. McBain, J. W., and Rysselberge, P. J. van, incompatibility between theories of complete dissociation and migration data for

bivalent ions, A., 143. McBain, J. W., Wynne-Jones, W. F. K., and Pollard, F. H., activity and adsorption of p-toluidine on the surface of its

aqueous solution, A., 1141.

McBain, J. W. See also Laing, M. E.

McBerty, F. H., and De Laval Separator Co., effecting reaction between liquids tending to form tight emulsions, (P.), B., 580. McBride, R. S., economic test of low-temperature coking, B., 545.

McBurney, J. W., compressive and transverse strength of brick, B., 395.

McCabe, E. B., Chamberlain, G. E., and Carbondale Machine Co., heat interchanger, (P.), B., 799.

McCabe, W. L., crystal growth in aqueous solutions. I. and II., B., 153, 305.

MacCallum, A. E. G., grinding mills, (P.), B., 116. single-roll grinding mills, (P.), B., 838.

[roller] grinding mills [for paint, etc.], (P.), B., 484. construction of grinding mills, (P.), B., 1000.

MacCallum, A. E. G., and Smith & Blyth, Ltd., S., grinding mills, (P.), B., 116.

McCallum, S. P., and Perry, W. T., strictions in high-frequency

discharges [in argon, etc.], A., 111.

MacCallum, S. P. See also Townsend, J. S.

M'Candlish, A. C. See Kay, R. R.

McCandlish, D., and Atkin, W. R., determination of insoluble matter in tannin solutions, B., 567.

McCandlish, D., and Hagues, G., comparator for the colorimetric determination of the hydrogen-ion concentrations of coloured solutions, B., 229.

neutralisation of brewing liquor, B., 261.

McCann, H. P., heat-treatment furnace, (P.), B., 305. McCarthy, J. C. See Armstrong Cork Co.

McCartney, W. See Harington, C. R.
McCaughey, W. J. See Fessler, A. H.
McCay, C. M., and Nelson, V. E., metabolism and vitamin-A,

McClave, J. M., and Conservo Co., treatment of [mineral] oils for distillation, (P.), B., 745.

McClellan, W. S., Spencer, H. J., Falk, E. A., and Du Bois, E. F., clinical calorimetry. XLIII. Thresholds of ketosis in diabetes, epilepsy, and obesity, A., 210.

McClellan, W. S., and Toscani, V., clinical calorimetry. XLIV. Changes in rate of excretion of acetone substances during the day, A., 211.

McClelland, E. W., thionaphthindole, A., 1084.

McClelland, E. W., Warren, L. A., and Jackson, (Miss) J. H.,
formation and stability of 2-thio-1;2-dihydrobenzisothiazoles, A., 1084.

McClelland, W. R. See Traill, R. J. McClendon, J. F., and Remington, R. E., determination of traces of iodine. II. Iodine in vegetables, A., 413.

176 McClintock, B., method for making aceto-carmine smears perma-Mace, C. H., smelting furnace, (P.), B., 856. McElroy, W. S. See Criep, L. H.
McElvain, S. M., acetoacetic ester condensation, A., 1424. nent, A., 857. See Barrett Co. McCloskey, G. E. See Barrett Co. McClosky, W. T., and Munch, J. C., bio-assay of commercial pituitary powders, B., 339.

McClure, C. W., and Huntsinger, M. E., fat metabolism. II. McElvain, S. M., and Bollinger, K. M., [preparation of] pyrrole, Character of blood-lipins in hepatic disorders, including migraine, McCluskey, K. L., menthol. II. Menthyl esters of 2-nitro-4carboxyphenyl-arsinic and -arsenious acids, A., 819. McCollum, E. V., Simmonds, N., Becker, J. E., and Shipley, P. G., experimental rickets. XXVIII. Does vitamin-D pass into the milk?, A., 359. McCombie, H. See Burns, J. MacConkey, C. A. H. See Lowry, T. M. McConnell, J. R. See Black, J. C. McCool, M. M., and Weldon, M. D., effect of soil type and fertilisation on the composition of the expressed sap of plants, B., 106. McCord, S. F., and Dorcam Maché Co., Ltd., manufacture of fibrous material and moulded articles, (P.), B., 676. MacCorquodale, D. W., alkylxanthines, A., 1083.
 McCoy, E., Higby, W. M., and Fred, E. B., assimilation of nitrogen by pure cultures of Clostridium Pasteurianum and related organisms, A., 1109.

McCracken, R. See Gilman, H.

McCrea, W. H., hydrogen chromosphere, A., 117, 617. boundary of the solar chromosphere, A., 487. turbulence in the sun's atmosphere, A., 1126. emission lines accompanying absorption lines in the spectra of stars, A., 1208. McCrone,  $R.\ O.\ O.$  See Henderson,  $G.\ G.$  McCrosky,  $C.\ R.$  Sec Gemmill, R., and Huff,  $E.\ R.$ McCrumb, F. R., and Kenny, W. R., possible indicators to determine the  $p_{\rm H}$  of alkaline solutions, A., 413. use of cresol-red in acid solutions, A., 782. effect of sunlight on the determination of chlorine [in water] by the o-tolidine method, B., 114. determination of small amounts of dissolved oxygen [in water], B., 456. McCulloch, L., insoluble sulphates and passivity, A., 1378. McCulloch, L., and Westinghouse Electric & Manufacturing Co., electron-emitting element [coating], (P.), B., 178. getter for vacuum devices, (P.), B., 1021.

McCullough, R., and Cortese, F., action of sulphuric acid in preparing alkyl halides, A., 291. McCutchan, P. See Shriner, R. L. McCutcheon, M. See Lucké, B., and Mudd, S. McDermet, J. R. de-aeration of water in relation to character of water supply, B., 1034.
McDermott, F. A., and Eastern Alcohol Corporation, production of fusel oil by fermentation, (P.), B., 867. McDermott, F. A. See also Du Pont de Nemours & Co., E. I. McDermott, P.J. See Cox, K. MacDonald, A.D. See Loomis, C.C.MacDonald, A. S., and Snead & Co., heat-treatment of metals, (P.), B., 213. Macdonald, J. K. L., more elementary treatment of the hydrogen atom in wave mechanics generalised for the moving nucleus, A., 373. Stark effect in a violet region of the secondary spectrum of hydrogen, A., 616. Macdonald, J. L. A., and Cramond, G. A., testing of wood pulps for strength, B., 390. Macdonald, J. Q., and Scott, W. McL., [apparatus for] electroplating [with chromium], (P.), B., 782.

McDonnell, C. C., and Graham, J. J. T., deterioration of soapnicotine preparations. II., B., 253.

MacDonnell, (Miss) N. M. See Algar, J.

McDougal, T. G., and A.C. Spark Plug Co., continuous-tunnel kiln, (P.), B., 557.

heat treatment for heat treatment [of ceramic ware]; tunnel kiln construction, (P.), B., 598.

MacDougall, F. H. See Smith, L. I. McDougall, J., distilling apparatus, (P.), B., 450. MacDowell, C. H., Meyers, H. H., and Armour Fertilizer Works,

production of sulphur dioxide and hydrogen, (P.), B., 172.

McDuffle, R. O. See Briggs, T. R.

McDowell, S. J., determination of workability of plastic clays,

A., 1079. McElvain, S. M. See also Andrews, L. H., Bolyard, N. W., Englert, S. M. E., and Thayer, J. R.

Macentelli, M. P. See Passerini, M.

McEwan, M. H. See Woodall-Duckham (1920), Ltd. McEwen, S., and International Coal Carbonisation Co., method of carbonisation or destructive distillation, (P.), B., 198\*. McEwen, S. See also Internat. Combustion, Ltd. MacFate, R. P. See Bachem, A. McGavack, J., Shive, R. A., and Naugatuck Chemical Co., preservation of rubber latex, (P.), B., 445. McGavack, J. See also Naugatuck Chem. Co. McGavran, J. See Collett, M. E. MacGee, A. E., physical properties of glass tank block refractories, B., 129. McGee, F. R., open-hearth furnace, (P.), B., 329. McGee, J. D., and Jaeger, J. C., motion of electrons in pentane, A., 231. McGee, J. D. See also Bailey, V. A. McGeorge, W. T., influence of manganiferous soils on the accuracy of the quinhydrone electrode, B., 297. McGhee, M.E. See Eldridge, H. McGill, W.J. See Sullivan, F.W.MacGillavry, (Miss) C. H. See Smits, A. MacGillavry, D., mol. wt. of cellulose, A., 262, 763. MacGillivray, J. M., and Wagner, R., insulin reaction, A., 595. MacGillivray, W. E. See Rule, H. G.
McGinty, D. A., regulation of respiration. XXV. Lactic acid metabolism of brain, A., 587. McGivern, W. J. See Thompson, C. H. McGlumphy, J. H. See Gilman, H. MacGowan, J. K. See Guggenheim, D. McGregor, T. See Wright, R. McGuinness, M, apparatus for treating materials, particularly for the heating and drying of pasty masses, (P.), B., 626.

McGuire, P. W. See Internat. Combustion, Ltd.

Machatschki, F., crystal form of magnesium tungstate, A., 18. lattice constants of various fahl ores, A., 747. Machebouf, M. A., phosphoaminolipins and sterols of bloodserum and -plasma, A., 206, 587. phosphoaminolipins and sterols of blood-serum and -plasma. II. Physical chemistry of the protein fraction richest in phospholipins and sterols, A., 83\$. physico-chemical state of lecithin and cholesteryl esters in blood-serum and -plasma, A., 1326 Machek, G., linear pentacene series. XVII. Dinitro-, diamino-, and dihydroxy-pentacene-5:7:12:14-quinones, A., 1453. Machida, H. See Nagayama, T. Machin, W. See Vickers-Armstrongs, Ltd. Machlet, A. W., furnace for melting metals, (P.), B., 603. Machlett, R. R. See Rainbow Light, Inc. Macht, D. I., pharmacological synergism of stereoisomerides, A., 467. phytopharmacological examination of adrenaline and ephedrine, A., 721. phytopharmacology of leucines and cystines, A., 961. McIlhenney, H. R., and Vulcan Detinning Co., manufacture of sodium stannate, (P.), B., 680. McIlvain, J. M. See Henderson, L. M. MacInnes, D. A., and Cowperthwaite, I. A., effect of diffusion at a moving boundary between two solutions of electrolytes, A., 268. MacInnes, D. A., Cowperthwaite, I. A., and Shedlovsky, T., conductivity and transport number of the chloride ion in mixtures of sodium and potassium chlorides, A., 1390. MacInnes, D. A., and Dole, M., differential potentiometric titration. III. Improved apparatus and its application to precision measurements, A., 666. glass electrode, A., 673. glass electrode apparatus for measuring  $p_{\rm H}$  values of very small volumes of solution, A., 1114. McIntire, C. V., and Consolidation Coal Products Co., ore-dust

treatment, (P.), B., 561.

McIntosh, D., experiments with carefully dried substances, A.,

manufacture of piperidine derivatives, (P.), B., 911.

McIntosh, D., additive compounds of hydrogen chloride with ethyl ether and acetone, A., 292.

isomorphism in oxonium compounds, A., 292.

McIntosh, J., and Diamond State Fibre Co., treatment of fibrous material, (P.), B., 204.
McIntosh, T. P., intervarietal chemical differences in the mature

potato tuber, B., 409.

Macintosh & Co., Ltd., C., Brazier, S. A., and Campbell, J. D., treatment of fabric with rubber solution, (P.), B., 295.

Macintosh & Co., Ltd., C., Brazier, S. A., and Hnrlston, E. H., manufacture of transparent or translucent rubber, (P.), B., 104. Macintosh & Co., Ltd., C., Brazier, S. A., and Thompson, G. F.,

bonding of articles or parts formed respectively of indiarubber and cellulose derivatives, (P.), B., 295.

manufacture of rubber or similar [hollow] articles, (P.), B., 485. Macintosh & Co., Ltd., C., and Toop, F. H., combining waste or scrap rubber with a natural or artificial aqueous dispersion of rubber, (P.), B., 830.

Macintosh & Co., Ltd., C., and Wolton, H. W., vulcanisation of rubber or similar coverings of metal rolls, (P.), B., 368.

Macintosh & Co., Ltd., C., and Young, H. C., curing [vulcanising] of sheet rubber, (P.), B., 991.

McIntyre, W. A., factors governing the durability of clay building

materials. I., B., 519.

McIntyre, W. A., and Schaffer, R. J., florescence [in building materials], B., 941.

MacIntyre, W. H., and Sanders, K. B., relation between the adsorbed and the exchangeable calcium and magnesium content of a soil four years after additions, B., 992.

McIver, M.A. See Gamble, J.L.

Mack, E., jun. See Heckert, W. W., and Klug, H. P. Mack, J. E., vector coupling in the nickel, palladium, and platinum-like spectra, A., 966.

Mack, J. E., and Sawyer, R. A., spectrum of doubly-ionised magnesium, A., 859.

Mack, M.J., imparting a wool finish to cotton cloth, (P.), B., 515. Mack, M.J. See also Phillips, A.W. McKay, A.T. Sco Bradley, H.

Mackay, G. M. J. See Gen. Electric Co.

McKay, M. E., muscle-glycogen in mammals, A., 467.

McKay, R. F. Seo Dunlop Rubber Co., Ltd. McKean, J.G., and Jones, R.F., straining and filtering apparatus,

(P.), B., 3.

McKechnie, A. B., progress of industrial heating by oil circulation, B., 541.

McKee, R. H., hydrolysis of methyl chloride, (P.), B., 511. McKee, R. H., and Parker, H. H., critical temperatures and oil

cracking, B., 83.

McKeefe, E. P. See Bradley, L.

McKeehan, L. W., magnetostriction, A., 384.

possible reflecting planes in cubic crystals, A., 870. McKeehan, L. W. See also Kovarik, A. F. McKendrick, A. G. See Kermack, W. O.

McKenna Process Co. of Illinois. See Langford, G.

McKenzie, A., and Lesslie, (Miss) M. S., elimination of the aminogroup from tertiary amino-alcohols. VI. Action of nitrous acid on the amino-alcohols from l-phenylaminoacetic acid, A.,

McKenzie, A., Luis, E. M., Tiffeneau, M., and Weill, P., trisubstituted stereoisomeric glycols, A., 1067.

McKenzie, A., and Mills, A. K., elimination of the amino-group

from tertiary amino-alcohols. V. Semipinacolinic de-amination and Walden inversion, A., 317.

elimination of the amino-group from tertiary amino-alcohols. VII. Wandering of hydrocarbon radicals in derivatives of

the optically active desylamines, A., 1066.

McKenzie, A., and Mitchell, A. G., asymmetric induction. I. Asymmetric synthesis and induction. II. Influence of solvent on the optical activity of the menthyl and bornyl esters of a-keto-acids, A., 877.

McKenzie, A. See also Roger, R.

McKenzie, B. F., [preparation of] levulic acid, A., 1041. McKenzie, B. F. See also Kendall, E. C.

Mackenzie, J. E., and Quin, J. P., compounds of alkaline-earth hydroxides with sugars, A., 797.

Mackenzie, K. G., Haskell, R., and Texas Co., lubricating oil, (P.), B., 707.

McKenzie, M. R. See Kramer, B.

McKenzie Mortar Co. See Harrison, D. M.

Mackeown, S. S., cathode drop in an electric arc, A., 1210.

Mackert, A., apparatus for indicating the saturation of an absorption system, B., 191, 305\*.

McKibbin, R. R., effect of sulphur on soils and on crop yields,

McKibbin, R. R., and Pugsley, L. I., use of the quinhydrone electrode, A., 109. Mackie, A. See Shoesmith, J. B.

McKie, D., heat of adsorption of oxygen on charcoal. III., A., 25. McKinley, L., and Pearce, J. N., [apparatus for determining] heat of adsorption on charcoal of certain organic vapours, A., 288.

McKinney, P. V., alundum crucible in the determination of carbon in crank-case oil, B., 586.

McKinney, R. S. See Baughman, W. F., and Jamieson, G. S.
MacKinnon, K. A., and Robertson, J. K., striations in high-frequency discharges, A., 972.

MacKinnon, K. A. See also Robertson, J. K.
McKittrick, D. S., sulphur compounds in pressure-cracked naphtha and cracked naphtha sludge, B., 584.

McKnight, C., jun., and International Nickel Co., method of making alloy steels, (P.), B., 23.

MacLachlan, A., and American By-Product Machinery Co., production of fertiliser, (P.), B., 733.

Maclachlan, I. F. See Boyd, G. L. McLachlan, J. A., manufacture of starch and glucose, B., 337. McLachlan, J. D., and Warren, S. J., production of sublimed

white lead [basic sulphate], (P.), B., 826.

Maclagan, N. F., use of 0·1N-hydrochloric acid for standardising electrometric  $p_{\rm H}$  measurements, A., 782.

Maclaren, R., thermostats, (P.), B., 496.

McLaughlin, G. D., Highberger, J. H., O'Flaherty, F., and Moore, E. K., bating, B., 830.

McLaughlin, L. [with Haber, E. S.], relation of vitamin-A content to size of leaves, A., 1496.

McLaughlin, L. See also Chatfield, C. Maclaurin, I. M. See Maclaurin, R.

Maclaurin, R., and Maclaurin, I. M., preparation of printer's ink, (P.), B., 610.

McLavy, J. R.See Potter, T. W. McLay, A. B. See McLennan, J. C.

Maclay, W. D. See Avery, S McLean, F. T., and Gilbert, B. E., aluminium toxicity, A., 719. Maclean, (Mrs.) I. S. See Battie, M. A., Clenshaw, E., and

Collinson, D. L. MacLean, J. D., absorption of wood preservatives, B., 284. McLean, W. See Robinson, G. W.

McLennan, J. C., McLay, A. B., and Crawford, M. F., second spark spectrum of mercury, Hg III, A., 365. first spark spectrum of thallium, Tl II, A., 366.

spark spectrum of thallium, Tl III, A., 1119.

spark spectrum of thallium, Tl II; term analysis; fine structure of lines, A., 1354.

McLennan, J. C., and McLeod, J. H., Raman effect with liquid oxygen and with liquid nitrogen, A., 378.

Raman effect with liquid oxygen, nitrogen, and hydrogen, A., 378. McLennan, J. C., McLeod, J. H., and Ireton, H. J. C., intensities

of the light of the oxygen green line in the night sky, A., 364. McLennan, J. C., Matheson, L. A., and Niven, C. D., photo-

electric effect at low temperatures, A., 367. McLennan, J. C., Perrin, M. W., and Ireton, H. J. C., action of

high-speed cathode rays on acetylene, A., 1249. McLennan, J. C., and Plummer, W. G., crystal structure of solid

methane, A., 750. McLennan, J. C., Ruedy, R., and Allin, E., absorption in excited

helium, A., 363. McLennan, J. C., Ruedy, R., and Anderson, J. M., nitrogen

afterglow, A., 378. McLennan, J. C., Ruedy, R., and Clements, F. H., fluorescence

excited in oxygen and nitrogen by ultra-violet light of short wave-length, A., 377.

McLennan, J. C., Ruedy, R., and Cohen, (Miss) E., magnetic

susceptibility of single crystals of zinc and cadmium, A., 19. McLennan, J. C., Ruedy, R., and Krotkov, V., altitude of the ozone layer, A., 419.

MacLennan, K. See Morgan, R. S.
Macleod, A. G. See Larmour, R. K.
McLeod, E. H., and Ault & Wiborg Co. of New York, manufacture of inorganic [iron] oxides [for pigments], (P.), B., 939. McLeod, J. H. See McLennan, J. C.

McLeod, J. M. See Ellingworth, S.

MacLeod, M., acctylation of diethylene oxide, A., 47.

MacLeod, M., and Robison, R., application of the iodometric method to the determination of small amounts of alcloses, A., 858.

McLuckie, C., apparatus for detecting the presence of explosivo or combustible gases, (P.), B., 969.

McLure, R. E. [with Lowy, A.], electrochemical preparation of phenylhydrazine, A., 1247.

MacMahon, A. M., alkali halide phosphors containing copper, A., 239.

McMaster, A. C., [machine for] treatment [printing and waxing] of paper, etc., (P.), B., 774.

Macmaster, J. C., Russell, A., and Stewart, A. W., Tesla-lumines-cence spectra. VI. Some phenolic compounds and their ethers, A., 1364.

McMaster, L., and Magill, A. C., 3:4-dichloronitrobenzene, A., 54. McMillan, F. R., basic principles of concrete making, B., 720. Macmillan, W. G., and Reade, T. H., elimination of the nitroso-

group from nitrosoamines, A., 549. MacMullin, R. B., George, A., and Mathieson Alkali Works, Inc., manufacture of calcium hypochlorite, (P.), B., 718.

MacMullin, R. B. See also Mathieson Alkali Works, Inc.

McMurtrey, J. E., effect of boron deficiency on the growth of tobacco plants in acrated and unacrated solutions, A., 855.

Macnabb. V. C., production of emission from oxide-coated fila-

ments: a process phenomenon, B., 782.

McNabb, W. M., and Wagner, E. C., evaluation of stibnite. I.

Determination of sulphur, B., 286.

McNair, L. C., and Hirst, J. F., rapid determination of dust in air, B., 701.

McNaily, J. G., and Godbout, A. P., fractional precipitation of cellulose acetate and properties of the fractions, A., 1427.

McNally, J. G. See also Whitby, G. S. McNamara, L. C. See Potter, T. W. McNamer, H. C. See Tefft, H. B.

McNeil, C., heat-exchanging devices, (P.), B., 739.

M'Neil, H. See Andrew, J. H.

McNeill, R., treating papermaking fibres in the making of certain kinds of paper, (P.), B., 204.

McNeill, T. R. See Cunningham, T. R.

McNeill, T. R. See Cunningham, T. R.

sector photometer in ultra-violet spectrophotometry, A., 374. Macnicol, A. N., manufacture of emulsive preparations, (P.), B., 903.

MacNicol, M. Soo Stevens, T. S. MacNider, W. De B., value of dextrose in maintaining acid-base equilibrium of the blood in pregnant animals. II. Effect of period of chloroform anæsthesia in pregnant animals: lack of protection conferred by dextrose, A., 348.

McNutt, J. D., and Winchester Repeating Arms Co., non-corrosive priming mixture, (P.), B., 738.

treatment of mercury fulminate, (P.), B., 738.

Macpherson, H., Simpkin, N., and Wild, S. V., pyritic oxidation with special reference to the Ravine seam, B., 40.

McQueen, H. S., geologic relations of the diaspore and flint fireclays of Missouri, A., 1418.

MacRae, D., and Westinghouse Lamp Co., vacuum device and method of cleaning up residual gases therein, (P.), B., 252.

MacRae, D. See also Dodds, H. H. McRae, D. F., and Ingvaldsen, T., lipoid phosphorus-cholesterol ratio before and after feeding irradiated eggs to tuberculous

patients, A., 93.

McRae, F. W., production of paint or waterproofing material, (P.), B., 1023\*.

McSwiney, B. A., dyestuffs fastness and perspiration, B., 430.

Macura, H. See Bunge, F. C.

McVay, T. N., and Hursh, K. R., effects of coal ash on refrac-

tories, B., 129.

McVay, T. N., and Thompson, C. L., X-ray investigation of the offect of heat on china clays, B., 129.

Madden, D. See Reilly, J.

Maddison, R. E. W., aluminium electrolytic condenser, A., 1371.

Maddock, A.J. See Band, W. Maddock, S.J. See Trimble, H.C. Madel, W.R. See Hinkel, L.E.

Madelung, E., translation of Dirac's theory of the electron into ordinary notation, A., 739.

Madelung, W., and Oberwegner, M. E., acetylene oxides and a-lactones, A., 791.

Madge, E. W. See Dunlop Rubber Co., Ltd.

Madinaveitia, A., catalase, A., 1106.
 Madorsky, S. L., and Gathmys Research Corporation, direct reduction of iron from its ores, (P.), B., 561.

Madsen, M., and Madsen Iron Works, material dryer, (P.), B., 739.

Madsen, S. O. See Lunde, G.

Madsen Iron Works. See Madsen, M.

Maeda, M., hormones and tissue respiration. I. Function of the thyroid gland, A., 358. Maeda, M. See also Kotaira, I.

Maeda, T., mechanism of the setting and hardening of cement, B., 325\*.

Mändlen, H. See Heide, C. von der.

Maffei, G., quinazolines. II. Synthesis of 6-cthoxy-3-p-ethoxyphenyl-3:4-dihydroquinazoline, A., 579. Magallin, M. See Bias, L.

Magat, C., alimentary [chocolate] substance, (P.), B., 416.

Mager, H., arrangement for cooling liquids or fluids, (P.), B., 665.

Magidson, O. Y., and Maksimov, V. I., oxidation of toluene to
benzoic acid by potassium dichromate and sulphuric acid, A., 926.

Magidson, O. Y., and Menschikov, G. P., [physiological effects of]

quaternary pyridine bases, A., 1106.

Magidson, O. Y., Zilberg, I. G., and Preobrasehenski, N. A., chlorination of acetic acid, B., 121.

Magierkiewicz, S. See Hüttig, G. F.

Magill, A. C. See McMaster, L.

Magistad, O. C., action of aluminium, ferrous and ferric iron, and

manganese in base-exchange reactions, B., 93.

hydrolysis of sodium and potassium zeolites with particular reference to potassium in the soil solution, B., 731.

Magistad, O. C., and Burgess, P. S., use of alcoholic salt solutions for the determination of replaceable bases in calcareous soils, B., 756,

Magistad, O. C. See also Breazeale, J. F. Magistris, H., hamolytic action of some hydrolysis products of lecithin, lecithides, and phosphatides. I. Products of inter-

mediary hydrolysis, A., 1096.
Magistris, H. Soo also "Pharmagans" Pharm. Inst. L. W. Gans

A.-G. Magnet-Werk G.m.b.H. Eisenach Spezialfabrik für Elektromagnet-

Apparate, disintegrating machines, (P.), B., 964. Magnitova, A.J. See Ivanov, S.

Magno, G. Seo Mezzadroli, G.

Magnus, A., theory of gas adsorption, A., 1139.

Magnus, A., and Giebenhain, H., calorimetric determination of heats of adsorption, A., 1231.

Magnus, A., and Kieffer, R., adsorption of carbon dioxide and ammonia by silica gel, A., 503.

Magnus,  $H_{\cdot,\cdot}$  distillation and cracking of hydrocarbons, particularly mineral oils and tars, (P.), B., 669. Magnusson, H. See Jorpes, E.

Maguire, W., treatment of artificial stone, cement, etc., (P.), B., 357.

Magyar, V. See Vágo, P. von.

Mahadevan, C., X-ray study of vitrain and durain and of their constituents, B., 965. Mahajan, L. D. See Seth, J.

Mahajani, G. S., theory of ferromagnetic crystals, A., 495.

Mahanti, P. C., and Das-Gupta, R. N., electric moment of primary alcohols, A., 980.

dielectric constant of binary mixtures. I. Methylene and ethylidene halides in benzene, A., 994.

Mahanti, P. C., and Sen-Gupta, D. N., dielectric constants of methylene chloride and bromide, A., 242.

electric moment and its relation to chemical constitution, A., 243.

Mahanti, P. C. See also Ghosh, P. N., and Ray, B. B. Mahin, E. G., diffusion of hydrogen in iron, A., 255.

Mahin, E. G., and Doyle, A. F., determination of arsenic, A., 285. Mahoney, J. J., ion mobilities using the Erikson method on gases of controlled purity, A., 369.

Maier, C. G., oxide cells of cadmium, copper, tin, and lead, A., 269.

Maier, O. See Hüttig, G. F., and Slonim, C

Maier-Bode, H. See Gerngross, O.

Maignon, F., and Knithakis, E., comparison of the effects of sodium hydregen carbonate and insulin on the excretion of ketonic substances in the urine of dogs on a water diet, A., 851.

Maignon, F., and Painvin, A., seasonal influence on the respiratory combustion of the deg, A., 460.

Mailander, R. See Houdremont, E.

Main, E. R. See Locke, A. Main, F. L., apparatus for purifying water and subjecting it to radium emanations, (P.), B., 114.

Maino, M. M., hormone content of the urine of the pregnant female, A., 959.

Mains, G. H., and Westinghouse Electric & Manuf. Co., liquid coating composition, (P.), B., 989.

Mainz, H. See Weissberger, A.

Mainzer, F., upper limit of hydrogen-ion and hydrogen carbonate concentrations of urine, A., 716.

relation between hamoglobin content and oxygen supply of the organism, A., 1324.

Mainzer,  $\tilde{F}$ ., and Joffe, A., ammonium chloride acidosis and diabetio acidosis, A., 92.

analysis of the acid-base equilibrium in the urine, A., 343. determination of organic acids in small amounts of urine and of the basic equivalents combined with the acids, A., 716.

Mair, B. J. See Richards, T. W.

Maiser, G. L. See Medekind, E.
Maitland, H. T., and Sun Oil Co., manufacture of filtration and decolorising absorbents, (P.), B., 896.
Maiuri, G., and Bossini, R. F., refrigerating machines of the absorption type, (P.), B., 420, 802.

Maiuri, G. See also Bossini, R. F.

Maiwald, K., determination and significance of buffering power of soils poor in carbonate, B., 221.

Maidel, I., precipitation of zinc as sulphide from faintly acid solutions, A., 285.

the null heat point and the heat of bodies, A., 1136.

Majer, V., solubility of carbon dioxide in sugar factory juices, and its formation through some amino-acids, B., 371 pH curves [of sugar solutions] following phenolphthalein

titrations, B., 489.

Majert, D. Sco Jander, G. Major, J. L., production of lamp-black, (P.), B., 196. Major, R. H., arterial hypertension, A., 1192.

Major, S. E., and Baker, E. F., low-pressure liquid fuel burners, (P.), B., 707.

Majorana, E. See Gentile, G.

Majorana, Q., and Todesco, G., preparation of photo-electric cells of thallium, A., 145.

Majumdar, K., are spectrum of chlorino, A., 365, 1117.

Majumdar, K., and Deb, S. C., spectrum of doubly-ionised chlorine, A., 733.

Majumdar, P. C. See Choudhury, J. K. Majumdar, S. K., coagulation of colloidal titanic hydroxide, A., 1007.

Majumder, R., spectrum of ionised rubidium, A., 481. Majumder, R. C. See Ray, B. B.

Makarova-Semljanskaja, N. See Rutovski, B.

Makins, W. B., and Brown & Makins, Ltd., preservation of wood [in situ and under reduced pressuro], (P.), B., 646.

Makita, S., and Kabushiki Kaisha Nihon Seikosho, heat treatment

of stool, (P.), B., 1020\*.

Makris, K. Seo Dalletos, J.

Maksimov, V. I. See Magidson, O. Y.

Maksorov, B. V., separation of carbazole from crude anthracene, B., 805.

Maksorov, B. V. Sco also Iljinski, M. A.

Makulec, F., Malachowski, R., and Manitius, L., transformations of propino-ay-dicarboxylie acid, A., 425.

Malachowski, R., stereochemistry of the glutaconic acids. I., A., 794.

constitution of anhydrotricarballylic acid, A., 1425.

Malachowski, R., Giedroyc, M., and Jerzmanowska, Z., aconitic acids. II. Constitution and modo of formation of aconitic anhydrides, A., 172.

Malachowski, R., and Maslowski, M., aconitic acids. I. Stereochemistry of aconitio acids, A., 172, 679\*.

Malachowski, R. See also Makulec, F.

Malachta, S. Seo Votoček, E.

Malaprade. See Travers, A. Malaprade, L., neutralisation of several mineral polyacids. I. and II., A., 882.

neutralisation of several mineral polyacids. III. Neutralisation curves of acid complexes of tungstic and molybdic oxides, A., 882.

Malaval, R. Sco Lumière, A.

Malczynski, S., effect of the use of a [mercury] silica lamp on the blood-cholesterol, A., 837.

Malet, G. See Chuit, P.

Malevanaia, M. See Thomas, P. Malhotra, K. L., solubility of mercuric bromide in ethyl and

methyl alcohols, A., 131. Malhotra, K. L. See also Dunnicliff, H. B. Malinovski, A., acid-resistant enamels, B., 19.

vitreous enamel and its defects, B., 356.

Malinovski, V. See Razubalev, G. Maliphant, G. S., and Rees, F. J., galvanising of steel or iron

sheets, (P.), B., 944.

Malitzky, W. P., spot analysis, A., 161.

Malitzky, W. P., and Koslovsky, M. T., microchemical determination of hydrocyanic acid by the Brunswik reaction, A.,

Malkowa, S. See Weizmann, M. Mallasee, L. W., and Mallasee, W. H., ferrous alloy, (P.), B., 603. Mallasee, W. H. See Mallasee, L. W.

Mallet, L., ultra-violet radiation of substances subjected to γ-rays, A., 372.

Mallet, M., gas washers, (P.), B., 4.

Mallinckrodt, E., jun., Farr, H. V., and Mallinckrodt Chemical Works, preservation of ether, (P.), B., 453.

Mallinckrodt Chemical Works. See also Mallinckrodt, E., jun.

Mallison, H., road tar, B., 583.
 Malloch, J. G., modifications of Rumsey's method for determination of diastatic activity in flour, B., 657.

resistance of wheat starch to diastatic activity, B., 866. Malm, C. J., and Clarke, H. T., action of fatty acids on cellulose, A., 299.

Malm, C.J.See also Clarke, H. T., and Kodak, Ltd.

Malm, L. L. See Auty, C. M.

Malmros, H. Sce Folin, O.

Malmy, M., preparation of neutralised olive oil, B., 607.
Malmy, M. See also Fleury, P.
Maloff, G. See Ehrismann, O.
Malone, J. G. See Dormer, J. A.
Malossi, L. See Caglicit, V.

Malowan, S., application of the Selivanov reaction [for detection of lævulose], B., 1027.

Malquori, G., system lead nitrate-ammonium nitrate-water, A.,

system Al(NO<sub>3</sub>)<sub>3</sub>-KNO<sub>3</sub>-HNO<sub>3</sub>-H<sub>2</sub>O between 0° and 60°, A.,

systems KCl-FeCl<sub>3</sub>-H<sub>2</sub>O and AlCl<sub>3</sub>-FeCl<sub>3</sub>-H<sub>2</sub>O between 0° and 60°, A., 267.

conductance of mixed solutions of lead nitrate and ammonium nitrate, A., 512.

system Fe(NO<sub>3</sub>)<sub>3</sub>-HNO<sub>3</sub>-H<sub>2</sub>O at 25°, A., 651. system Fe(NO<sub>3</sub>)<sub>3</sub>-KNO<sub>3</sub>-HNO<sub>3</sub>-H<sub>2</sub>O, A., 651. systems Al(NO<sub>3</sub>)<sub>3</sub>-Fe(NO<sub>3</sub>)<sub>3</sub>-H<sub>2</sub>O and KNO<sub>3</sub>-Fe(NO<sub>3</sub>)<sub>3</sub>-H<sub>2</sub>O at 0° and at 40°, A., 767.

viscosity and conductance of mixed solutions of lead nitrate and ammonium nitrate, A., 1015. system AlCl<sub>3</sub>-FcCl<sub>3</sub>-KCl-HCl-H<sub>2</sub>O at 25°, A., 1388. Malquori, G. See also Parravano, N.

Malsch, J., measurement of dielectric constants in liquids at high electrical field strengths, A., 13.

Malsch, L. See Liters, H.
Maltby, E. J. See Campbell, W. R.
Maltby, J. G. See Kipping, F. S.
Maltitz, E. von. See Brassert, H. A.

Malvos, R., and Crozemarie, M., furnace [for refractories, etc.], (P.), B., 979\*.

Malyarevski, V. I., and Papkov, V. V., manufacture of synthetic nitric acid from nitrogen oxides under pressure, B., 281.

Malyschev, N., alleged salt-hydrolysis of starch, A., 602.

Mameli, E., relationship between chemical constitution and physiological action, A., 719.

Manchester, T. C., substitute for mothers' milk, (P.), B., 868. Manchester Oxide Co., Ltd., and Clayton, R. H., purification of crude or impure sulphur, (P.), B., 682.

purification of coal gas, (P.), B., 969.

Manchot, W., constitution of sulphur-nitric oxide compounds of

univalent iron, cobalt, and nickel, A., 1028. Manchot, W., and Davidson, S., univalent iron, nickel, and cobalt. VI. Compounds of iron, sulphur, and nitric oxide, A., 526.

Manchot, W., and Enk, E., iron tetranitrosyl, A., 1027.

Manchot, W., and Gall, H., univalent iron, nickel, and cobalt. IV. Action of nitric oxide on ferrous mercaptide, A., 47. univalent iron, nickel, and cobalt. V. Formation of nickel

carbonyl, A., 526. methyl alcohol compound of iron nitrosyl, A., 1027.

Manchot, W., and Lehmann, G., characterisation of sulphurnitrio oxide compounds of univalent iron, cobalt, and nickel, A., 1027.

Manchot, W., and Schmid, H., reaction between sulphur dioxido

and nitrogen peroxide, A., 779.

Mandel, H., tensor form of the wave-mechanics equation for an electron, A., 739.

Mandell, W., determination of the piezoelectric moduli of sodium ammonium tartrate, A., 19.

change in elastic properties on replacing the potassium atom of sodium potassium tartrate by ammonium, A., 23.

Mandelstam, L. See Landsberg, G.

Mandrika, N. V., colorimetric determination of copper in babbitt metal, B., 1046.

Mandrino, G. See Rebek, M. Manell, E. See Sundelin, G.

Maneval, W. E., staining methods for bacteria and yeasts, A.,

Manganese Patents Corporation. See Trumbo, H.

Mangano, A. See Crippa, G. B. Mangelli, P. O. See Ebel, F., and Karrer, P.

Manhatten Electrical Supply Co., luminous electrical discharge tube, (P.), B., 481.

Manhattan Electrical Supply Co., and Hendry, W. F., metal-glass

union, (P.), B., 356.
Manicke, P. See Kunz-Krause, H. Manini, (Mllc.) A. See Zappi, K. V.

Manitius, L. See Makulec, F.

Manker, F. W., and Surface Combustion Co., Inc., [annealing]
furnaces, (P.), B., 58.

soaking-pit furnaces, (P.), B., 739.

Mankin, W. R., occurrence of molybdenum in hen's eggs, A., 341.

Manley, J. J., dehydration of benzene, A., 753.

Manley, R. E., and Texas Co., treating adsorbent materials, (P.), B., 343.

Mann, F. C., and Boothby, W. M., physiology of the liver. XVI. Respiratory quotient and basal metabolic rate following removal of the liver and injection of dextrose, A., 346.

Mann, F. C. See also Markowitz, J., and Wilhelmi, C. M. Mann, F. G., cobaltic derivatives of  $\beta\beta'\beta''$ -triaminotriethylamine,

A., 545.

stability of complex metallic salts, A., 678.

Mann, F. G. See also Bell, E. V. Mann, F. J. See Pummerer, R.

Manneback, C., intensity of the secondary scattered radiation (Raman lines), A., 866.

Mannens, M. J. See Pieters, H. A. J. Manners, W. E. See Appleyard, K. C.

Mannesmann Lieht Akt.-Ges., [electrolyte for Leclanché type] galvanio cell, (P.), B., 362.

Mannheimer, M., chemical equilibria involving reactions between two condensed phases, A., 884.

determination of the moisture content of coal and similar substances, B., 763.

Mannich, C., and Butz, A., hydrogenation of δ-lactones, A., 442. crystalline anhydrides of monosubstituted malonic acids, A.,

Manning, A. B., determination of unsaturated and aromatic hydrocarbons in light oils and motor spirits, B., 546.

Manning, A. B. See also King, J. G.

Manning, J. E. See Allmand, A. J. Manos, E., [copper] alloys, (P.), B., 60.

Mansfeld, G., and Horn, Z., so-called specific dynamic action of foods, A., 1109.

Mansio, G. See Beaumont, G. Manske, R. H. F., modified Curtius synthesis of primary amines, A., 698.

calycanthine. I. Isolation from Meratia pracox, A., 944. Manske, R. H. F., and Johnson, T. B., ephedrine and structurally similar compounds. I. Synthesis of ephedrine, A., 441. ephedrine and structurally similar compounds. II. Ephedrine

homologues; resolution of ephedrine, A., 916.

Manske, R. H. F. See also Coles, H. W.

Mantell, C.L., methods proposed and in use for refining aluminous ores, B., 132.

Mantius, O. See Simonson, W. H.

Mantle, G. D., and Mantle Engineering Co., heat-exchange apparatus, (P.), B., 739.

Mantle Engineering Co. See Mantle, G. D.

Manufactures de Machines Auxiliares pour l'Électricité & l'Industrie, impregnation of articles with varnishes of synthetic resins, (P.), B., 530.

Manz, G. See Braun, J. von.
Marakov-Semljanski, J. See Schorigin, P.

Marangoni, E., and Lamort, M. J., influence of various alcohols in the preparation of cyclic thiocarbamides, A., 1057.

Maranon, J. M., total alkaloids of Datura fastuosa, L., and Datura alba, Nees, from the Philippines, A., 361.

alkaloidal constituent of Artabotrys suaveolens, Blume, A.,

Marburg, E. C. See I. G. Farbenind. A.-G.

Marcelet, H., utilisation of marine-animal oils in [internal-combustion] motors, B., 43.

Marcelin, A., surface varnishes on water and molecular dimensions, A., 1001.

March, M. Seo "Kolloidchemie" Studienges. m.b.H.

Marchal, (Mlle.) G., action of silica and alumina on sodium sulphate, A., 266.

action of silica, alumina, and kaolin on barium sulphate, A., 411.

decomposition of sodium sulphate, A., 772. decomposition of barium sulphate, A., 896.

Marchant, C., washing apparatus for separating coal and like materials, (P.), B., 885\*.

Marchionini, A. See Schade, H.

Marchlewski, L., phyllocrythrin, A., 1468.

Marchlewski, L., and Mayer, J., absorption of ultra-violet light by the methyl-d-glucosides, A., 740.

absorption of ultra-violet light by some organic substances, A., 1362.

Marchlewski, L., and Skarzynski, B., absorption of ultra-violet light by some hormones and allied substances, A., 1213.

Marchlewski, L., and Szymanski, A., chlorophyll group, A., 829. Marchlewski, L., and Wierzuchowska, J., absorption of ultraviolet light by some proteins, A., 459.

absorption of ultra-violet light by some purine derivatives and allied substances, A., 740.

Marchlewski, L., and Wyrobek, O., absorption of light by some organic substances, A., 740.

Marchlewski, L. See also Kwieciński, L.

Marcille, R., determination of corrected volatile acidity of wines, B., 534.

"bacteriophage," a new antiferment with formic acid base, B., 534.

Fachini's reaction for detection of "residue" olive oils, B.,

Marconi's Wireless Telegraph Co., Ltd., pyro-recording paper and the like, suitable for use in picture and the like telegraph receiving apparatus, (P.), B., 74.

Marcus, J. K., separation of vitamin fraction from cod-liver oil,

extraction of unsaponifiable and difficultly-saponifiable matter from fatty material, (P.), B., 529, 785\*.

Marcusson, J., catalytic polymerisation of fatty oils, B., 292.
Marcy, F. E., mills, (P.), B., 78.
Marden, J. W., Rich, M. N., and Westinghouse Lamp Co., production of rare metals, (P.), B., 945.
Marden, J. W., Richardson, H. K., and Westinghouse Lamp Co.,

refractory coment, (P.), B., 324.

Marden, J. W., Thomas, T. P., Conley, J. E., and Westinghouse Lamp Co., preparation of refractory metals, (P.), B., 399.

Marden, J. W., and Westinghouse Lamp Co., manufacture of

articles of refractory metal or metallic mixtures, (P.), B., 24. activation of refractory metal filaments, (P.), B., 250. production of uranium and uranium-zinc alloys, (P.), B., 945. [tungsten-tantalum] alloy, (P.), B., 985.

Marden, J. W. See also Rentschler, H. C.

Mardick, J. R., and Universal Oil Products Co., cracking of [petroleum] oils, (P.), B., 744.

Mardles, E. W. J., solubility of cellulose derivatives. I. and II., B., 975.

Mardles, E. W. J. See also Callendar, H. L.

Marecek, W. See Ohle, H.

Marck, I., determination of sulphur in organic compounds, A.,

Marek, I. [with Krajčinovič, M., and Zaljesov, G.], determination of nitrogen by Dumas' method, A., 1093\*.

Marenzi,  $\check{A}$ . D. See Folin, O.

Mareš, V., clarification of diffusion juice in relation to the possible inversion of sucrose and influence of micro-organisms, B., 790.

Maresca, T. Sec Vitale, T. Marescotti, A. See Rossi, G.

Margaillan, L., regularity of variation of characters of oils extracted from an animal as a function of the section used, A., 952.

Margaria, R., alkalino reserve of sea-water, A., 1035.

reaction-regulating power of sea-water, A., 1417.

Margenau, H., dependence of ultra-violet reflexion of silver on plastic deformation, A., 972.

Margetson, O. See Gasified Fuel, Ltd., and Hazlehurst, H. E.

Margoliss, (Mlle.) E. See Longuinov, V.

Margosches, B. M., Fuchs, K., and Ruzicka, W., degree of saturation of the resin acids. IV., B., 443.

Margosches, B. M., Krakowetz, B., and Schnabel, F., acetone as

fat-solvent in the rapid determination of iodine value in the technical laboratory, B., 62. iodine values of mineral oils, B., 841.

Margreth, G., behaviour of lactic acid in the blood. I. Typhoid and tuberculous infections, A., 717.

behaviour of the lactic acid of the cerebrospinal fluid in normal and pathological conditions, A., 841.

lacticemia, spontaneous and induced, as a test of hepatic function, A., 841.

Maricq, L., electrometric titration of iodomercurates, A., 1259. potentiometric determination of morphine with an iodomercuric reagent, A., 1320.

Marie, A. C., action of insulin on the carbamide of the blood,

A., 959.

Marie, C., and Haenny, C., ammonia-oxygen gas cell, A., 1015. Marie, C., and Jacquet, P., electrolytic copper obtained from electrolytes containing gelatin; determination of water-content; hygroscopic and catalytic properties, A., 775.

Marie, C., and Lejeune, G., electrolytic oxidation of various organic substances, A., 886.

solubility of ether in concentrated solutions of mineral acids, A., 1375.

Marinesco, structure of solutions of gelatin, A., 646. Marinesco, G., Kauffman-Cosla, O., and Draganesco, S., action of insulin and pituitrin on the elimination of urine and especially on carbonuria in diabetes insipidus, A., 841.

Marinesco, N. See Garreau, (Mile.) Y.

Marion Steam Shovel Co., Cowardin, S. P., and Cowardin, H. A., preparing charges containing [atomised] liquid fuel for use in internal-combustion engines, (P.), B., 274. Mark, H., liquid interference, A., 744.

determination of particle size by the use of X-rays, A., 985. atom models of aromatic compounds, A., 1050.

Mark, H., and Meyer, K. H., structure of the crystalline part of cellulose, II., A., 245.

Mark, H., and Susich, G. von, structure of the crystalline part of cellulose. III., A., 1132.

X-ray studies on pentaerythritol, A., 1223.

short exposure times with X-ray diagrams, A., 1354.

Mark, H., and Wierl, R., relative intensities of the Stark effect components of the [Balmer] Hg and H, lines, A., 367. intensity problem in the Stark effect in hydrogen, A., 963. intensity of the Stark effect in the direction of the lines of

force, A., 1354. Mark, H., and Wolf, Karl, polarisation of characteristic X-rays,

A., 123. Mark, H. See also Bergmann, E., Ehrenberg, W., Fickentscher,

H., Hengstenberg, J., Kälberer, W., and Meyer, K. H.

Mark, R. E., kidney function: relationships between action of carbamide, diuresis, and mineral metabolism, A., 95.

Marker, R. E. See Edgar, G.

Markert, E. See Heim, F. Markert, H. See Müller, Erich.

Markley, K. S. See Kingsbury, S. S.

Markman, A., and Sergeiev, M., relation between titre and refractive index of fat [during hardening], B., 528.

Markman, A., and Vassiliev, V., influence of temperature on hydrogenation [of oils], B., 608.

Markowicz, E., swelling [absorption] phenomena of aluminium fatty acid [soaps] in various solvents. I.—III., B., 101.

Markowitz, J., Mann, F. C., and Bollman, J. L., glycogenic function of skeletal muscle in dehepatised dog and rôle of insulin, A., 475.

Marks, B. M., is hydrogen peroxide formed in electrolytic gas

by a-rays? A., 523.

Marks, E. See Walker, H.

Marks, H. P. See Culhane, K.

Marks, S., and Morrell, R. S., determination of organic peroxides A., 1268.

Marks, S. See also Morrell, R. S.

Markwell, W. A. N., and Walker, L. J., commercial evaluation of cloves, B., 148.

Markwood, L. N., automatic pipette, A., 673.

Marlatt, A. See Clow, B.
Marlatt, C. D., Industrial Waste Products Corporation, and Dickerson, W. H., chrome tanning material, (P.), B., 531.

Marley, S. P., Gruse, W. A., and Gulf Refining Co., motor fuel [antidetonants], (P.), B., 121.

Marling, P. E., effect of age on the apparent gain in weight of drying-oil films, B., 442.

effect of various driers on linseed oil films during ageing, B., 783. Marque, F. See Fleury, P.
Marque, J. See Fleury, P.

Marqueyrol, M., chemical and ballistic stabilities of BAm and BD powders. V., B., 378.

heating in vacuo of nitroglycerin powders, B., 873.

[smokeless powder] stabilisers, B., 873. Marqueyrol, M. Seo also Koehler, A.

Marr, R. A., manufacture of pulp and fibre products; treatment of cane material, (P.), B., 678\*.

Marrack, J., and Hewitt, L. F., osmotic pressure of egg-albumin, A., 26, 1381.

Marrack, J. See also Horton, K.

Marrassé, L., hexamethylenetetramine and formaldehyde as nutrients for the haricot bean, B., 408.

Marrian, G. F., cestrin. I. Preparation from urine ation from an unidentified solid alcohol, A., 1495. I. Preparation from urine and separ-

Marris, G. C. See Gen. Electric Co., Ltd.

Mars, G., effect of alumina on the properties of steel-furnace slags, B., 942.

Marschalk, C., preparation of perylene, A., 308.

halogen derivatives of  $\beta$ -naphthol unsubstituted in position 1, A., 310.

action of normal sulphites on 3-chloro-β-naphthol and on 1:3-dichloro-β-naphthol; a new case of intramolecular transposition, A., 1291.

Marschalkowitz, D. See Bickel, A. Marschner, M. See Girsewald, C. von. Marsden, A. See Filma Oil Burners, Ltd.

Marsh, G., and Cruess, W. V., detection and determination of carbon disulphide in fumigated almonds, B., 736.

Marsh, G. E., washing by decantation, A., 44.

Marsh, J. K., rare earths associated with uraninites, A., 1126. order of fractionation of rare-earth bromates, and a search for illinium, A., 1407.

Marsh, J. T. See Tootal Broadhurst Lee Co. Marsh, M. C., flexible seal for electrodes, A., 1034.

Marsh, R. W., fungicidal action of sulphur. III. Toxicity of hydrogen sulphide and the interaction of sulphur with fungi, A., 958.

Marshall, A., vapour pressure of nitroglycerin and nitroglycol, B., 539.

Marshall, A. E., and Maryland Pigments Corporation, manufacture of a white-pigment base, (P.), B., 1023.

Marshall, A. L., combination of hydrogen and oxygen under the influence of cathode rays, A., 155. formation of ozone by cathode rays, A., 155.

Marshall, C. E. See Wiegner, G.
Marshall, F. D., apparatus for distillation or heat treatment of carbonaceous or other materials; apparatus for producing coke and gas from solid carbonaceous material; gas and coke plant apparatus, (P.), B., 349\*. production of mixed coal gas and water-gas, (P.), B., 548\*.

Marshall, G. G., and Booth, H. S., alloy, (P.), B., 604.

Marshall, J. See Boots Pure Drug Co., Ltd.

Marshall, L. C., recombination of ions and of ions and electrons in gases, A., 1210.

Marshall, L. H., and Ohio Brass Co., metallurgical process and product [cast iron], (P.), B., 523.

Marshall, L. K., and Spencer Thermostat Co., metallic thermostat, (P.), B., 308.

Marshall, M. J., laboratory rectifying column, A., 167.

Marshall, M. J., and Bramston-Cook, H. E., heat of adsorption of oxygen on [coconut] charcoal, A., 999.

Marshall, M. J., and Nunn, E. H., effect of high-frequency dis-

charges on the dissociation of gases, A., 890.

Marshall, M.S. See Henry, L.D.

Marshall, P. G. See Dickinson, W. P. Marshall, W. K. See Grewe, E.

Marson, P., reports on glass-house pots. II., B., 472. Marsson, V., and Haase, L. W., determination of lead by means

of 8-hydroxyquinoline, A., 164. Marston, H. A., burners for pulverised fuel, (P.), B., 746.

Marston, H. R., chemical composition of wool, with special reference to the protein of wool fibre (keratin), B., 277.

Marston, H. R., and Robertson, T. B., utilisation of sulphur by

animals, A., 466.

Marten, E. A., Peterson, W. H., Fred, E. B., and Vaughn, W. E., relation of temperature of fermentation to quality of sauerkraut, B., 953.

Martenet, M. See De Montmollin, M.

Martens, R., peptide nitrogen of blood, A., 339.

Martin, A. R., electrical conductivities of uni-univalent salts in benzonitrile, A., 143.

heat of dissociation of some strong electrolytes in benzonitrile and their calculation from molecular structure, A., 1389.

Martin, E., manufacture of aluminous cements, (P.), B., 646\*. Martin, E. G., Field, J., and Hall, V. E., metabolism following anoxemia. I. Oxygen consumption and blood-lactates after

oxercise, A., 718.

Martin, F. G., and Ramsay, W., heat-exchange apparatus comprising [brass] tubes having an electrolytic [chromium] deposit

on the interior surface, (P.), B., 739.

Martin, G. See Rubber Growers' Assoc., Inc., and Thiollet, R. Martin, Geoffrey, theory of fine grinding. XI. Calculations relating to diameters, surfaces, and weights of homogeneous grades of crushed quartz sand, B., 153.

Martin, Geoffrey [with Bowes, E. A.], theory of fine grinding. IX. Connexion between the statistical diameter and statistical volume of irregularly-shaped particles of crushed sand. X. Connexion between the statistical diameter of crushed sand particles and their statistical surface, B., 153.

Martin, H. See Goodwin, W.

Martin, H. E., and Celanese Corporation of America, extracting [fatty] acids from solutions, (P.), B., 973.

Martin, H. S. Seo Chance Bros. & Co., Ltd.

Martin, J. C., effect of crop growth on replaceable bases in some Californian soils, B., 297.

Martin, J. Holmes. See Buckner, G. D.

Martin, John H., preparation of fur for shrinking and felting, (P.), B., 242.

shrinking and felting of animal fibres, (P.), B., 1012.

Martin, M.J., photo-electric and thermionic properties of molybdenum, A., 968.

Martin, R. B., and Minerals Separation N. American Corporation, froth-flotation concentration of ores, (P.), B., 524.

Martin, R. I. See Brit. Thomson-Houston Co., Ltd.

Martin, W. H., Cole, A. F. W., and Lent, E. E., photo-expansion of chlorine, A., 276.

Martin-Colvin Co., production of salt from brines and solutions, (P.), B., 394\*.

Martinet, J., and Dansette, A., N-arylisatins and isomeric acridinemesocarboxylic acids, A., 452.

Martinet, J., and Drobatschev, A., benzanthrones, B., 670.

Martinez, F., and Gomez, A., hæmostatic, (P.), B., 73.

Martinez, G., heulandite of Monastir, A., 674.

Martini, A., new salts of nitrosophenylhydroxylamine and their application in microchemical analysis, A., 164, 415\*. microchemical mineral analysis; [detection of nickel, cobalt,

copper, zinc, and cadmium], A., 387.

micro-crystalloscopy in gels, A., 898.

micro-chemical mineral analysis. III., A., 900. occurrence of nickel in bones, A., 953.

Martins, I. See Baggesgaard-Rasmussen, H.

Martland, M., and Robison, R., preparation and use of the bone phosphatase, A., 603.

Martling, M. G., tangential separator, (P.), B., 307.

Martus, M. L., Becker, E. H., and Ross, J. G., primary battery, (P.), B., 859.

Martyn, T. G., apparatus for [wet] separation of the constituents of pulp, (P.), B., 461\*.

Marum, E. See Thomas, Leif.

Marusawa, T., Naito, D., and Uchida, J., sulphite-celluloso process. I. Action of hydrogen sulphite solutions on sugars, A.,

Maruyama, I., distribution and variation of glycogen in the intestinal mucous membrane of the mammalian embryo, A., 1478.

Marvel, C. S., and Belsley, J. P., identification of amines. IV. Methanesulphonamides, A., 684.

Marvel, C. S., and Birkheimer, E. R., sodium salts of  $\omega$ -hydroxy-

butyrio, -valeric, and -hexoic acids, A., 295.

Marvel, C. S., and King, W. B., [preparation of] ethyl cinnamate A., 1068.

Marvel, C. S., and Lazier, W. A., [preparation of] benzoylpiperidine, A., 1078.

Marvel, C. S., and Porter, P. K., [preparation of] chloromethyl ether, A., 1039.

Marvel, C. S., and Shelton, R. S., local ancesthetics from 2-\beta-

hydroxyethylpiperidine, A., 577.

Marvel, C. S., and Tanenbaum, A. L., [preparation of]  $\gamma$ -phenoxypropyl bromide, A., 1062.

Marvel, C. S. See also Corley, R. C., Rossander, S. S., and Tanenbaum, A. L.

Marvin, C. F., jun. See Bridgeman, O. C.

Marvin, H. H., combination bands in the infra-red spectra of carbon tetrachloride and silicon tetrachloride, A., 974.

Marx, K. Seo I. G. Farbenind. A.-G.

Marx, L. Seo Fraenkel, W. Marx, P., smelting furnaces, (P.), B., 780.

Marx, R., [supplying pulp in] manufacture of paper, (P.), B., 320.

Marx, R. J., clarification of liquids and recovery of solids therefrom, (P.), B., 628\*.

Maryland Pigments Corporation. See Marshall,  $A.\ E.$ 

Masaki, K., composition of the cyanide complex radical of metals. I. Silvor cyanide complex radical, A., 1153.

Masaki, O., photographic sensitivity. V. Effects of heat on the absorption spectrum and photo-electric conductivity of silver bromide, and their relation to the photographic action, A., 741.

photographic sensitivity. I. Effect of heat on sensitivity curve of photographic plates. II. Sensitivity of photographic plates at various temperatures, B., 377. photographic sensitivity. III. Sensitising action of previous

exposure to a dim light. IV. Desensitising action of previous fogging by X-rays, B., 538.

Masamune,  $H_{\cdot,\cdot}$  salts and blood-sugar,  $A_{\cdot,\cdot}$  1096. Mascarelli,  $L_{\cdot,\cdot}$  diphenyl and its derivatives. II. Scission into optical antipodes of compounds without asymmetric atoms, A., 181.

diphenyl and its derivatives. III. Stereoisomerism of monophenylnaphthalene and dinaphthyl derivatives. IV. Considerations on the great number of optical antipodes without asymmetric atoms which can be derived [from diphenyl], A., 307.

Maschinenfabrik Benninger Akt.-Ges., machines for dyeing, impregnating, or like treatment of fabrics, (P.), B., 470. Maschinenfabrik Beth Akt.-Ges., bag filters for cleaning air, (P.), B., 665.

Masehinenfabrik Buckau Akt.-Ges. zu Magdeburg, drying apparatus, (P.), B., 2.

Maschinenfabrik Buckau R. Wolf Akt.-Ges. See Notz, H. Maschinenfabrik Esslingen, manufacture of groy cast iron with low carbon content and of any desired composition, (P.), B.,

287. Maschinenfabrik Oerlikon, pressuro gauge for high vacua, (P.),

B., 1002.

Maschinenfabrik Schweiter A.-G., washing, bleaching, or dycing artificial silk on cross-wound bobbins, (P.), B., 1013.

Maschkilleisson, E., comminution of nickel catalyst, B., 522.

Maschovetz, W. Seo Finkelstein, W.

Mascré, M., fixation of chondriosomes of the vegetable cell, A., 611.

Masel, W. A., rapid determination of tin in tinplate, B., 286. Masima, M., and Sachs, G., conductivity and cold-working, A.,

density and cold-working, A., 873. heat effect in the stretching of brass crystals, A., 989. Masing, G., crystallographic slip on stretching zinc and cadmium, A., 634.

mechanism of rolling, hammering, and drawing zinc and cadmium, B., 99.

theory of the age-hardening process based on researches on beryllium-copper alloys, B., 724.

methods of research in metallography, B., 922.

Masing, G., and Dahl, O., constitution of copper-beryllium alloys, A., 995.

changes in the ctching structure of beryllium-copper alloys during ageing, A., 996.

technical properties and improvement of beryllium-copper alloys, B., 723. ternary alloys containing beryllium and a copper basis, B.,

influence of small additions of phosphorus on the age-hardening

of beryllium-copper alloys, B., 724. changes in electrical conductivity and volume of beryllium-

copper alloys during ageing, B., 724. beryllium-nickel alloys, B., 724.

aluminium alloys containing beryllium; silicon-beryllium alloys, B., 724.

Masing, G., Dahl, O., and Siemens & Halske Akt.-Ges., improving

the qualities of nickel-beryllium alloys, (P.), B., 134.

Masing, G., and Haase, C., changes in the modulus of elasticity during ageing of beryllium-copper alloys, B., 724.

Masing, G. See also Dahl, O. Masini, A.

See Bulano, M. Masiyama, Y., magnetostriction of a single crystal of nickel, A., 19.

Maske, F. Sco Krüger, F.

Maskell, E. J., and Mason, T. G., transport of nitrogenous substances in the cotton plant. I. Downward transport of nitrogen in the stom, A., 854.

Maslakowez, I., influence of traces of foreign ions on the absorption of alkali halide crystals, A., 240.

Maslova, A. L. See Bobko, E. V.

Maslowski, K., and Regulski, H., formation of zinc nitride in the

electric arc, A., 1402.

Maslowski, M. See Malachowski, R.

Mason, A. M. See Cooper, C. J.

Mason, C. M. See Buehrer, T. F. Mason, C. W. See Smith, G. B. L. Mason, F. A., action of phosphorio oxide on  $\beta$ -anilinobutyracetal, A., 1055.

Mason, M. F. See Robinson, C. S. Mason, R. B., effect of iron on the magnetic susceptibility of

aluminium, A., 1370.

Mason, T. G. See Maskell, E. J.

Mason, T. N., and Wheeler, R. V., relative inflammability and explosibility of coal dusts, B., 41.

Masperi, D. See Carubi, L.

Massa, N., apparatus for treating [granulated] cork [for use as

insulating material, etc.], (P.), B., 848.

Massa, R. F., and Carbide & Carbon Chemicals Corporation, refrigerant lubricant and method of lubricating refrigerating machinery, (P.), B., 579.

Massatsch, C., and Matro Ges.m.b.H., manufacture of a thera-

peutically active iron preparation having yeast as its basic substance, (P.), B., 493\*.

Masse, C., and Société Civile des Procédés Masse, treatment of plant fibres, (P.), B., 715\*.

Massengale, O. N. See Russell, W. C.

Masson, H. J., and Hamilton, W. F., auto-ignition temperatures. III. (a) Mixtures of pure substances; (b) gasolines, B., 585. Masson, I. Sco Gibby, C. W.

Massy, R., medicinal use of the essential and pyroligneous oils of Cedrus atlantica, B., 910.

Mastbaum, O. See Hoppel, P., and Liesegang, R. E.

Masuda, M., Japanese kaolinite clays, B., 1044. Masuda, S. See Kita, G., and Yamamoto, S.

Masui, K. See Kita, G.

Masui, R., decomposition of sugars and glucosamines in a dilute alkali solution, A., 912.

Masumoto, B., biochemical studies of pityrol. IV. Acidic constituents, B., 157. Masumoto, H., intensity of magnetisation in iron-nickol-cobalt

alloys, A., 1133.

Matei, I., condensation of acenaphthenequinone with phenols, A., 1303.

Matériel Téléphonique, manufacturo of lead-antimony alloys for use in sheathing electric cables, etc., (P.), B., 399.

Mathers, F. C., and Gosnell, E. C., source of error in determination of plasticity of hydrated lime, B., 474.

Mathesius, H. See Mathesius, W. Mathesius, W., influence of size of coke on degree of combustion in front of the tuyeres, B., 840.

Mathesius, W., and Mathesius, H., purification of gases from blast furnaces, (P.), B., 900\*.

Matheson, A. M. See Herrly, C. J.

Matheson, G. L., and Maass, O., pure hydrogen peroxide. VI.,

Matheson, H. W., and Canadian Electro Products Co., Ltd., manufacture of acetic acid, (P.), B., 772\*.
Matheson, H. W., Nieuwland, J. A., and Canadian Electro Pro-

ducts Co., Ltd., phenol-acetylene resin, (P.), B., 651. Matheson, H. W., Skirrow, F. W., and Canadian Electro Products Co., Ltd., formation of [ethylidene] esters of carboxylie acids, (P.), B., 916.

Matheson, H. W., and Smith, J. C., electrode [for water-resistance

steam generator], (P.), B., 252.

Matheson, H. W. See also Canadian Electro Products Co., Ltd.

Matheson, L. A. See McLennan, J. C.

Mathewson, S. B., Jamison, W. K., and Lecar Carbon Co., retort, (P.), B., 267.

Mathey, E. Du B., Williams, A. O., and American Cyanamid Co., phosphoric acid recovery, (P.), B., 681.

Mathias, E., Crommelin, C. A., and Watts, H. G., rectilinear

diameter of ethylene, A., 629. Mathiesen, A. See Ditmar, R.

Mathieson Alkali Works, manufacture of calcium hypochlorite, (P.), B., 776\*, 814\*.

Mathieson Alkali Works, Inc., George, A., and MacMullin, R. B., manufacture of calcium hypochlorite, (P.), B., 643.

Mathieson Alkali Works, Inc., and Guyer, J. A., manufacture of calcium hypochlorite, (P.), B., 643.

Mathieson Alkali Works, Inc. See also MacMullin, R. B., and Taylor, M. C.

Mathieu, L., manufacture of spun glass, (P.), B., 852.

Mathieu, M., determination of the edge of the lattice of the compound K<sub>2</sub>[PtBr<sub>6</sub>], A., 870. X-ray study of some halogen salts, A., 1252.

Mathis, H., insulin, A., 1495. Mathis, W. T. Sce Bailey, E. M. Mathur, K. G. See Bhatnagar, S. S.

Mathur, K. N. See Bhatnagar, S. S. Mathur, P. N., making steel in a basic-lined convertor from Indian pig iron at Mysore Iron and Steel Works, B., 720. Mathur, R. N. See Bhatnagar, S. S. Matignon, C. See Florentin, J. M. F. D.

Matile, P. See De Montmollin, M.

Matlack, M. B., rind of California oranges, A., 477.

Matoba, S. See Hamasumi, M. Matossl, F. See Schaefer, C.

Matro Ges.m.b.H., manufacture of dry yeasts for medical and pharmaceutical purposes, (P.), B., 73.

manufacture of a therapeutically active iron preparation having yeast as its basic substance, (P.), B., 303. manufacture of food or dietetic preparations, (P.), B., 492.

Matro Ges.m.b.H. See also Massatsch, C.

Matsubara, S. See Gyotoku, K. Matsuda, T. See Okada, H. Matsui, M. See Katagiski, H.

Matsuike, Y., dielectric constants of some organic solvents, A.,

Matsuka, S., change of hydrogen-ion concentration in the urine at low atmospheric pressure, A., 1480.

Matsukawa, T., equilibrium diagrams of the aluminium—

antimony-silicon and the aluminium-antimony-copper systems with aluminium as their chief constituent, A., 884

Matsumiya, K., and Nakata, H., organic compounds of arsenic. VI. Electrolytic reduction of some arylarsinic acids, A.,

preparation of salvarsan, (P.), B., 911. Matsumura, K., acridine compounds, A., 578.

Matsucka, B., mechanism of the reduction of blood-sugar values by the action of insulin, A., 609.

Matsuoka, M., action of gallosterin, A., 1344. Matsushima, S. See Kondô, M.

Matsnyama, K. Seo Kita, G.

Matsuyama, M., malt catalase, A., 1488.

Matsuyama, Y., density of molten metals and alloys, A., 22, 993. Matter, O., manufacture of heavy-metal azides, (P.), B., 75.

explosive shells, (P.), B., 228. explosive projectile for infantry rifles and quick-firing small arms, (P.), B., 738.

Matters, R. F., calcium metabolism in the human female, A.,

1101.

Matthaes, W. See Lottermoser, A.

Matthes, H., and Schütz, P., detection of isopropyl alcohol by means of mercuric sulphate solution (Deniges, reagent), B.,

liquor aluminii acetico-tartarici, D.A.B. VI., B., 301.

Matthes, S., dependence of δ-radiation on outgassing of platinum foil, A., 1210

Matthew, J. A. See Linen Industry Res. Assoc.

Matthews, C. G., metals in connexion with wort and beer, B.,

Matthews, E., Budde effect in bromine, A., 276.

Matthews, I. C., and Burgess, A. M., laboratory humidity cabinet,

Matthews, N. W., detection and determination of sucrose by the ammonium molybdate method, B., 69.

Matthews & Yates, Ltd. See Stott, O.

Matthias, E. See Giordani, F.

Matthies, O., Dieterle, W., and Agfa Ansco Corporation, photographic silver halide emulsion, (P.), B., 798\*.

Matthies, O. See also Dieterle, W.

Matthiessen & Hegeler Zinc Co. See Gerlach, O.

Matthis, M. A. R., analysis of tinned copper wires, B., 921.

Matti, J., and Augmentine Holding Société Anonyme, manufacture of ordinary bread, (P.), B., 301\*.

Mattiek, E. C. V., and Hallett, H. S., effect of heat on milk:

(A) on the coagulability by rennet; (B) on the nitrogen, phosphorus, and calcium content, B., 735.

Mattick, W. L., and Buchwald, K., blood-cholesterol in cancer.

II. Diagnostic relations, A., 594. blood-cholesterol in cancer. III. Relation to non-malignant

conditions, A., 594.
Mattison, I. H. See Hill, R. M.

Mattson, S., laws of soil colloidal behaviour. I., B., 904.

Matzel, C., and Krupp Grusonwerk Akt.-Ges., F., production of zinc, (P.), B., 400\*.

Matzko, S. N., vitamin-A content of the subcutaneous fat of the dolphin (Delphinus delphis), A., 610.

vitamin-D content of the fat of marine mammals, A., 1497. Maude, A. H., and Rubber Service Laboratories Co., manufacture of glacial acetic acid, (P.), B., 806.

Maude, A. H. See also Reid, H. S. Mauerhoff, E. See Dieterle, W.

Mauler, C., ascertaining the resistance to rusting shown by iron,

steel, and iron alloys, (P.), B., 563\*.

Maurer, E., Schropp, W., and Ducrue, H., effect of fertilisation with iodine on the growth and composition of food plants, B.,

Maurer, Ed., Maurer's manganese steel in the development of non-rusting steel, B., 854.

Maurer, Ed., and Bischof, W., calculation of the water-gas equilibrium by means of the exact form of Nernst's heat equation, A., 396.

Maurer, Ed., and Schroeter, K., determination of the austenite content of steel by measuring the magnetic saturation value. and the mechanism of the annealing process in hardened steel, B., 685.

Maurer, K., new, unsaturated anhydro-sugars. II., A., 428. Mauriac, P., glycolytic power of polymorphonuclear leucocytes, A., 950.

Maurin. See Aversenq.

Maurstad, A. See Vegard, L. Mauss, W. See Auwers, K. von.

Mauthe, G. See Grasselli Dyestuff Corporation.

Mauthner, F., y-resorcylic acid [2:6-dimethoxybenzoic acid], A.,

synthesis of acetosyringone, A., 701.

Mauz, E., limiting short wave-length for the Herschel effect, A.,

Maver, M. E., preparation, rearrangement, and reduction of β-methylbenzhydrylhydroxylamine, A., 58.

Mavrodin, A., action of organomagnesium compounds on ethyl ethylcyanoacetate, A., 796.

Mawson, H., mass circulation in carbon dioxide refrigerating machines, B., 625.

Max, N. See Böeseken, J.

Maxarov, B. V., tar from peat of Ostashkov district, B., 117.

Maxim, M., and Vasiliu, C., choline content of blood at different

points in the circulation, A., 461. Maxim, N., mechanism of the reaction between organo-magnesium compounds and NN-disubstituted crotonamides, A.,

structure of benzene, A., 1176.

Maxim, N., and Ioanid, N., mechanism of the reaction between organo-magnesium compounds and N-substituted cinnamanilides, A., 442.

Maximov, A. J., and Naugatuck Chemical Co., manufacture of

thiuram monosulphides, (P.), B., 11. Maximov, J., and De Costa, M. S., treatment of wood, (P.), B.,

Maxson, R. N. See Holmes, N. N.

Maxwell, F., [cane] milling-diffusion process in Egypt, B., 617. Maxwell, G. B., and Wheeler, R. V., striations in explosive flames, A., 147.

inflammation of mixtures of olefines and air in a closed spherical vessel, A., 403.

flame characteristics of "pinking" and "non-pinking" fuels. II., B., 878.

Maxwell, L. C., and Bischoff, F., solubility of lead salts in physiclogical salt solutions, A., 1114.

Maxwell, L. R., spectra of mercury above the ionisation potential, A., 112.

determination of the mean life for the 4797 A. spark line of doubly-ionised mercury, A., 112.

cosmic radiation and radioactive disintegration, A., 116.

mean life for the mercury spark spectrum, A., 1119.

nature of the production of one of the spark lines of mercury and the determination of mean life, A., 1353.

Maxwell-Lefroy, H., and Graesser Monsanto Chem. Works, Ltd., treating [textile] materials to render them undesirable as habitation for insects, (P.), B., 848\*. May, D. W., banana, A., 1113. May, O. E. See Herrick, H. T.

May, R. M., microchemistry of the nervous system. II. Cerebral water, nitrogen, sulphur, and phosphorus in experimental traumatic encephalitis, A., 716.

May & Baker, Ltd. See Balaban, I. E. Maydel, J., general formula for calculating the atomic or molecular heat and the specific heat of elements in the solid state, A., 386.

Mayer, B. See Soc. of Chem. Ind. in Basle.

Mayer, F. See Grasselli Dyestuff Corporation.

Mayer, Fritz, and Mombour, A., action of phenylthiocarbimide on phenols, A., 1290.

Mayer, Fritz, Schäfer, W., and Rosenbach, J., phthalide derivatives, A., 1295. Mayer, H. See Abderhalden, E.

Mayer, H. H., and La Motte, R. G., recovery of zinc [sulphate] from slags, (P.), B., 897.

Mayer, J. See Marchlewski, L., and Wessely, F.

Mayer, J. E. See Lewis, G. N.

Mayer, J. L., assay of ground linseed for non-volatile, ether-soluble extractive, B., 909.

Mayer, K., Röntgen-ray photography; Röntgen diaphragm, (P.), B., 494.

Mayer, Karl, errors due to the substitution of "ash" for "mineral constituents" in coal analyses, B., 966.

Mayer, Kurt. See Fodor, A.

Mayer, L. See Knaff, A.

Mayer, M., separation of phosphorus from phosphorus [containing] vapours, (P.), B., 814.

Mayer, (Mile.) N., potential of carbohydrate solutions, A., 1147. Mayer, P., dimethyldihydroresorcinol as reagent for aldehyde, and carbon assimilation, A., 296.

Mayer, R. M., enzymic character of coproporphyrin synthesis in yeast; cell-free increase of coproporphyrin, A., 100.

Mayer & Sohn, J. See Treusch, A.

Mayes, H. A., and Turner, E. E., nitration of phenylcyclohexane and its p-halogeno-derivatives, A., 550.

Mayes, J., and Mayes Bros. Tool Manufacturing Co., [quicksetting] cementing compound, (P.), B., 130.

Mayes Bros. Tool Manufacturing Co. See also Mayes, J.

Maynard, I. See Sherman, A. E.

Mayr, C., and Burger, G., potentiometric titration of mercurous ion with ammonium oxalate and its application to the determination of chromate, A., 1413.

Mayr, C., and Fisch, J., thermometric titration methods, A., 528.

Mayr, E. See Rüdiger, M.

Mayrhofer, A., and Wasitzky, A., occurrence of iodine and fluorine in the organism. I., A., 478.

Mayrhofer, A. See also Fuchs, L.

Mayrhofer, K. See Frankenburger, W.

Mazak, P., and Suszko, J., ketosulphonic acids. I. Synthesis of 1:2:3-thiodiazole derivatives, A., 829, 1085.

Maze, A. E., [artificial] resin and its manufacture, (P.), B., 530. Mazel, W. M., E.M.F. of silver-silver chloride-calomel cells, A., 653.

Mazumdar, R. C. See Majumder, R. C.

Mazume, T., hydrogenation of fatty oils. VII. Formation of isooleic acid by the hydrogenation of soya-bean oil. VIII. Hydrogenation of the methyl esters of oleic and linoleic acids, B., 26.

Maznme, T., and Nagao, S., polymerisation of tung oil and the ethyl ester of elmostearic acid by heat, B., 26.

Mazume, T., and Shobayashi,  $\check{G}$ . polymerisation of linolenic

acid and herring oil by heating, B., 332.

Mazza, F. P. [with Ferrajolo, M.], products of the auto-condensation of ethyl hexahydroanthranilate and ethyl \( \Delta^4\)-tetra-

hydroanthranilate, A., 312. Mazza, F. P. [with Fiei, O.], action of magnesium [alkyl] compounds on anhydrides of asymmetric polycarboxylic acids: action of magnesium ethyl iodide on cinchomeronie anhydride,

Mazza, F. P., and Melchionna, E., aromatic compounds containing tellurium, A., 336.

Mazza, F. P., and Solazzo, L., action of acetylene on selenium, A., 290, 675.

Mazza, F. P., and Spagnolo, G., [essential oil and alcohol from] Camphorosma Monspeliacum from S. Cesarea (Lecce), A., 323.

Mazza, L., and Nasini, A. G., crystal structure of nickel, A., 382. Mazzari, A., Hall effect in very intense magnetic fields, A., 752. Mazzetti, C., manufacture of potassium chlorate by double decomposition, B., 775.

Mazzocco, P., muscle-lactic acid in decapsulated rats, A., 347.

Mead, J., jun., pulverising mill, (P.), B., 497.

Mead, T. H. See Hughes, O. L.

Meanwell, L. S. See Barkworth, H.

Mebane, W. M., Dobbins, J. T., and Cameron, F. K., solubility of the phosphates of calcium in aqueous solutions of sulphur

dioxide, A., 997. Meber, P. W., Knöller, G., Herbst, K., and Trissler, A., mechanism

of Fischer's indole synthesis, A., 936.

Mechanical Rubber Co., Rose, R. P., and Owen, A. F., manufacture of leather substitute, (P.), B., 895.

Mechlin, F. J., recovery of products from "spent doctor" and

caustic solutions, B., 86.

Mechlin, R. S., and Bauer Bros. Co., attrition mill, (P.), B., 913.

Mechlin, W. H., and Bauer Bros. Co., grinding plate for attrition mills, (P.), B., 740.

Mecke, R., band spectrum of lanthanum oxide, A., 236.

Mecke, R., and Finkelnburg, W., band systems of the hydrogen molecule, A., 624.

Mecke, R. See also Badger, R. M., and Finkelnburg, W.

Meckenslock, K. See Jantsch, G.

Mecre, L. R., strengthening and rendering impermeable paper or similar materials, (P.), B., 14.

Mednikianz, G. A., action of ergotamine and adrenaline on the residual nitrogen content of fluid perfusing isolated organs,

Medrano, L. See García-Banus, A. Meehan, A. F., and Meehanite Metal Corporation, heat-treatment of iron, (P.), B., 984.

Meehan, A. F. See also Meehanite Metal Corp.

Meehan, P. A., and American Dressler Tunnel Kilns, Inc., sheetsteel annealing, (P.), B., 398.

Mechanite Metal Corporation, and Mechan, A. F., improving the character of grey iron castings by graphitisation, (P.), B.,

Mechanite Metal Corporation. Sec also Mechan, A. F. Meek, S. St. P., tracer compositions, (P.), B., 539.

Meerburg, P. A., demixing curves with more than one inflexion, A., 1228.

Meerseheidt-Hüllessem, J. von, apparatus for stability tests of smokeless powder at 135° and 120°, B., 228.

Meerwein, H., Bersin, T., and Burneleit, W. [with Pöhls, P.], methylations with diazomethane in the presence of catalysts, II., A., 681.

Meerwein, H., and Bodendorf, K., dichlorophosphoric acid, A.

Meerwein, H., and Migge, A., hydrogenation of anthroic acid and the question of the existence of two isomeric 9:10-dihydroanthracene-9-carboxylic acids, A., 696.

Mees, R. T. A., determination of honey in honey cake. I. and II., B., 109, 698.

Meeze, A. G., manufacture of fixed gases and condensable hydrocarbon fluids from bituminous materials by fractional dis-

integration, (P.), B., 632. Meeze, E. H. See Daniels, J. S.Mega, P. See Ciusa, R.

Meggers, W. F., wave-lengths and Zeeman effects in yttrium spectra, A., 1.

wave-length measurements in the arc and spark spectra of

hafnium, A., 112.
Meggers, W. F., De Bruin, T. L., and Humphreys, C. J., first spectrum of xenon, A., 1118. first spectrum of krypton, A., 1118.

Meggers, W. F., and Bussell, H. N., analysis of the arc and spark spectra of yttrium (Y 1 and Y 11), A., 733.

Meggers, W. F., and Walters, F. M., jun., absorption spectra of iron, cobalt, and nickel, A., 3.

Meggers, W. F. Socielle Bussel, K. and Wiers, C. C.

Meggers, W. F. See also Burns, K., and Kiess, C. C.

Megson, N. J. L. See Carter, S. R. Mchl, P. See Rakovski, W.

Mehl, R. F., and Canfield, R. H., compressibility of crystals, A., 1227.

Mehlig, J. P., preparation of stable ammonium molybdate solution, A., 526.

Mehring, A. L., Ross, W. H., and Merz, A. R., preparation of potassium nitrate, B., 430.

Mehring, A. L. See also Deming, W. E. Mehrotra, M. R., and Dhar, N. R., adsorption. XXII. Adsorption of alkali and of cupric salts in the precipitation of cupric hydroxide, A., 389.

Meidinger, W., bromination of benzene in light, A., 1153.

Meier, C., die-casting of cast iron, (P.), B., 984. Meier, H. See Klumpp, E.

Meier, P. See Thielepape, E. Meier, R. See Briner, E., Demuth, F., and Hochrein, M.

Meier & Weichelt. See Vogel, E. O. Meier-Mohar, T. See Hölzl, F.

Meierson, G. A., reduction of tungsten by hydrogen; mechanism of formation of crystals of tungsten of different sizes, A., 160.

Meigs, Bassett & Slaughter, Inc. See Bassett, H. P.

Meihuizen, S. H., determination of moisture in milk powder, B., 867. Meints, R. E., and Wilkinson, J. A., reactions in liquid hydrogen

sulphide. V. Reaction with furfuraldehyde, A., 525. Meisenburg, K., and Winthrop Chemical Co., Inc., manufacture

of crotonyl bromide, (P.), B., 845\*.

Meisenheimer, J., Beisswenger, O., Kaussmann, H. O., Kummer, U. von, and Link, J., oximes of the three methylbenzils, A., 564.

Meisenheimer, J., and Schmidt, Willi, substitution and addition. II. Esterification with p-nitrobenzoyl chloride, A., 1444.

Meisenheimer, J., and Theilecker, W., constitution of oximes. X., A., 566.

is 2:3-dipbenylindone resolvable into optically active antipodes? A., 448. Meiss, (*Miss*) J. C., viscose silk, B., 389.

Meissner, A., pyro- and piezo-electricity, A., 248. Meissner, F. von. See Pollak, J.

Meissner, J. See Schmid, Arnold. Meissner, K. L., influence of iron, silicon, and manganese on the ageing of duralumin, B., 983.

Meissner, W., measurements with the aid of liquid helium. III. Resistance of metals; superconductivity of tantalum; contribution to the explanation of superconductivity; specific heat of gaseous helium, A., 250. superconductivity of thorium, A., 871.

Meiter, E. G., ignition of mixtures of air with natural gas and with methane by induction coil sparks, B., 83.

Meitner, L., suitable vapour-gas mixtures for experiments with Wilson's cloud method, A., 129.

radiation in the upper atmosphere, and its bearing on physical and cosmic processes, A., 535.

Meixner, F. See Emmert, B.

Meixner, J. See Lange, E.

Meksyn, D., dynamics of an electron, A., 7.

electromagnetic field of an electron; the electron as a gravitational phenomenon, A., 484. Mel, P. K. See Gavrilov, N. M.

Mel, S. K. Seo Gavrilov, N. M.

Melamid, M., production of liquid products from coal and other solid carbonaccous material, (P.), B., 196.

manufacture of sulphonic acids with tanning properties, (P.),

treating castor oil to produce substances miscible with mineral oils, (P.), B., 483.

obtaining liquid products from coal and the like, (P.), B., 932. Melbye, R. S. See Goldschmidt, H.

Melchionna, E. See Mazza, F. P.

Meldrum, A. N., and Alimchandaui, R. L., substances related to cochinillio and carminic acids. II. Synthesis of α-coccinic acid (m-oxyuvitic acid), A., 813.

Meldrum, N.U. See Dixon, M. Meldrum, W.B., and Newlin, I.G., solubility of benzidine sulphate and benzidine hydrochloride in hydrochloric acid solutions, A.,

Melendy, J. G., and General Chemical Co., conversion of sulphur dioxide into sulphur trioxide, (P.), B., 641.

Meliana Corporation of America. See Melliand, M.

Mellanby, E., Surie, E., and Harrison, D. C., vitamin-D in ergot

of ryo, A., 1203.
Melle, F. A. van, and Shurink, H. B. J., crystal structure of pentaerythritol, pentaerythrityl tetra-acetate, and dibenzylidenepentaerythritol, A., 1223.

Melle, F. A. van. See also Jaeger, F. M.

Melli, G., and Radici, M., does a gastric lipase exist? A., 209. Melliand, M., and Meliana Corporation of America, treatment [surfacing] of vegetable fibres and fabrics; increasing the

strength and elasticity of cotton fibres, (P.), B., 679\*. Mellor, J. W., and Ceramic Patent Holdings, Ltd., manufacture of ceramic products, (P.), B., 897.

Mellor, J. W. See also Ceramic Patent Holdings, Ltd. Melnikov, N. N. See Nekrassov, V. V. Meloche, D. H. See Amer. Radiator Co.

Meloche, V. W., and Woodstock, W., two ammonium molybdotellurates, A., 282.

Meloche, V. W. See also Urban, F. Melsen, J. A. van. See Ruzicka, L. Melzer, J. L. See Weiss, R.

Menasci, R., uric acid in organic fluids, A., 343.

Menaul, P., detoxicated cottonseed meal, B., 70.
Menchikowsky, F., and Ravikovitch, S., influence of the replaceable bases on the soil solution formation in mineralised soils. B., 258.

Mende, H., determination of chromium, tungsten, molybdenum, vanadium, nickel, manganese, and cobalt in high-alloy steels,

Mendel, B., colorimetric determination of lactic acid, A., 110. Mendel, L. B. See Frisch, R. A., Goddard, V. R., and McAmis,

Mendes de Leon, C. See Snapper, I.

Mendlik, F., and Wibaut, J. P., dehydrogenation of yohimbine, A., 335.

Mendoza, M. See Imperial Chem. Industries, Ltd.

Mendum, W. C. See Conant, J. B.

Meneghini, D., low-temperature distillation [of coal] in the "Italian system" furnace, B., 1037.

Menkin, M. F. Seo Menkin, V. Menkin, V., and Menkin, M. F., influence of carbon dioxide tension on the oxygen dissociation curve [of hæmoglobin], A.,

Menon, A. S. See Watson, H. E.

Menon, K. N., and Simonsen, J. L., electrolytic reduction of the

imides of cyclic acids, A., 443.

Menon, K. N. See also Hariharan, K. V.

Menschick, W. See Fromherz, H.

Menschikov, G. P. See Magidson, O. Y.

Menten, M. L., and Krugh, H. M., changes in blood-dextrose in rabbits after intravenous injections of histamine, A., 349.

Menten, M. L., and Krugh, H. M., insulin content of the pancreas following intoxication of rabbits with paratyphoid-B filtrate and dysentery bacilli, A., 357.

Menzel, H., and Gäbler, C., compounds of alkali phosphates with

hydrogen peroxide, A., 278.

Menzel, H., and Kretzschmar, W., critical examination of the determination of nitrous oxido by gasometric methods, A., Menzel, H. F. W., surface coatings of ebonite, hard rubber, etc.,

(P.), B., 786.

Menzies, A. C., ground-terms in the spectrum of nickel II and proposed standard wave-lengths in the Schumann region, A., 226.

reversals in the arc spectrum of nickel, A., 226.

Raman effect from powdered crystals, A., 1217. polarisation of Raman lines, A., 1361.

Menzies, A. W. C., insecticidal solution, (P.), B., 1026.

Menzies, A. W. C., and Sloat, C. A., spiral markings on carborundum crystals, A., 381.

Mercier, Y., electric arc treatment of liquid hydrocarbons and

apparatus therefor, (P.), B., 804. Mercil, E. J. See O'Neill, W. J.

Merck, E., vacuum [evaporating] apparatus, (P.), B., 308. Merck, E. See also Merck, W.

Merck, F. Sec Merck, W.

Merck, K. Seo Merck, IV. Merck, L. See Merck, W.

Merck, W., Merck, K., Merck, L., Merck, W., and Merck, F., (Merck, E.), manufacture of arylaminoalkylcarbinols [β-amino-α-arylethyl alcohols], (P.), B., 149.

new antirachitic preparations and their manufacture, (P.), B.,

preparation of 1-phenyl-2-methylaminopropanol-1 [ $\beta$ -methylamino-a-phonyl-n-propyl alcohol], (P.), B., 622.

Merejkovsky, B., photographic developers, (P.), B., 38. Merica, P. D. See Internat. Nickel Co.

Merki, W. See Soc. of Chem. Ind. in Basle. Merkle, F. G., influence of fertiliser treatment on the content of exchangeable cations in Hagerstown silt loam, B., 67.

Merkle, H.  $\bar{A}$ . See Roberts, H.  $\bar{P}$ . Merksammer, E. See Weiss, R.

Merl, T., and Beitter, H., detection of maltol and of salicylic acid in presence of maltol, B., 375.

Merley, S. R., and Doherty Research Co., dehydration of alcohols, (P.), B., 511.

separation of polymerides from crude alcohol mixtures, (P.), B., 887.

Merrell Co., W. S. See Bye, M.

Merriam, H. F., and General Chemical Co., manufacture of sulphuric acid, (P.), B., 977.

Merrill, A. T., and Clark, W. M., production of gelatinase by

B. proteus, A., 101.

Merrill, D. R., and Union Oil Co. of California, emulsifiable oil,

(P.), B., 548.

clarifying, decolorising, and neutralising oils, (P.), B., 745. Merrill, E. C. See Towle, E. C.

Merrill, H., and Tower Manufacturing Co., purification of nitroaniline, (P.), B., 550.

Merrill, H. B., action of water on vegetable-tanned leather.

I. Rate of removal of uncombined soluble matter, B., 567. modified Wilson-Kern extractor [for hide powder], B., 567.

determination of moisture in tanning extracts; report of Committee of the American Leather Chemists' Association, B., 613.

Merrill, H. B., and Niedercorn, J. G., state of combination of acid sulphate in chrome [-tanned] leather, B., 368.

effect of neutralisation of chrome[-tanned] leather on fat absorption, B., 406.

Merrill, J. L., and Russell, A. S., electrolytic deposition of molybdenum at a mercury cathode, A., 1402.

Merrill, J. L. Seo also Jackson, K. S.

Merrill Co. See Mills, L. D.
Merten, W. J. See Metropolitan-Viekers Electrical Co., Ltd.

Mertz, E. See Heller, G.

Merz, A., and Brennecke, E., corrosion of aluminium bronze tubes, its causes and prevention, B., 132.

Merz, A. R. See Adams, J. R., Mehring, A. L., and Ross, W. H.

Merz, E. See Ruggli, P. Merz, F., manufacture of ointments, particularly water ointments, (P.), B., 997\*.

Merz, O., influence of light on "toning down" [of colours], B.,

viscosity of nitrocellulose solutions. III., B., 786.

Messe, W. See Scholl, R.

Messenger, (Miss) H. A. See Webb, H. W. Messer, L. R. See Davis, C. W. Messer, W. E., reactions of olefines of high mol. wt. with sulphuric acid, hydrochloric acid, and air, A., 537.

Messiner, L. See Barrenscheen, H. K. Messkin, V. S. See Stogov, A. F.

Messler, E. L., refractory composition for [ingot mould] hot tops, (P.), B., 683.

Mesta, L. W. See Niedringhaus, C. I.

Mesta Machine Co. See Niedringhaus, C. I.

Mestscherski, B. A., generalisation of the third law of thermodynamics for the case of gases, A., 992. Metal Castings Holding Co. See Myers, H. A.

Metal & Thermit Corporation. See Deppeler, J. H., and Paul, I. M.

Metallbank & Metallurgische Gesellschaft Akt.-Ges., manganese bronzes, (P.), B., 60.

working-up of copper- and zinc-containing ores, (P.), B., 133. production of anhydrous zinc chloride, (P.), B., 171. copper alloys, (P.), B., 176.

production of active carbon, (P.), B., 196.

copper-silicon alloys, (P.), B., 214.

heating stills particularly for steam-distillation of fatty acids, (P.), B., 482.

Metallbank & Metallurgische Gesellschaft Akt.-Ges., Girsewald, C. von, and Kaiser, R., decomposition of aluminous minerals with nitric acid, (P.), B., 207.

Metallbank & Metallurgische Gesellschaft Akt.-Ges., Girsewald, C. von, and Siecke, W., manufacture of beryllium sulphate,

(P.), B., 207. Metallbank & Metallurgische Gesellschaft Akt.-Ges., and Laden-

burg, R., electrical gas-purifying apparatus, (P.), B., 25. Metallbank & Metallurgische Gesellschaft Akt.-Ges., and Sitz, G., production of white lead, (P.), B., 610.

Metallbank & Metallurgische Gesellschaft Akt.-Ges. See also

Hubmann, O., K.D.P., Ltd., and Metallges, Akt.-Ges. Metallgesellschaft Akt.-Ges., manufacture of sulphuric acid and oleum by the contact process, (P.), B., 431.

mechanical roasting furnaces, (P.), B., 522. method of reciprocal action between gases and finely subdivided materials, (P.), B., 544.

[fixing of] roof, wall, and other surface coverings of corrosionproof metals or alloys, especially copper, (P.), B., 558. production of zinc from oxidised zinc compounds, (P.), B.,

removal of halogen ions from metal salt solutions containing same as impurities, (P.), B., 1014.

Metallgesellschaft Akt.-Ges. See also Girsewald, C. von, and Haedrick, P.

Metallgesellschaft Akt.-Ges. (Metallbank & Metallurgische Ges. A.-G.), neutralising free fatty acids by glycerin, (P.), B., 482. Metallon Development Co., Ltd., and Sargint, A. M., compositions for use as paints, plasters, cements, putties, fillers, etc., (P.),

B., 920. Metallon Development Co., Ltd. See also Sargint, A. M.

Metallwerke vorm. J. Aders Akt.-Ges., production of salt by vacuum evaporation, (P.), B., 321.

Metals Production, Ltd. See Taplin, T. J.

Metals Protection Corporation, technically pure CrO3 [chromium trioxide], (P.), B., 978.

Metals Recovery Co. See Sayer, R. E.
Metcalf, G. R. See Cox, J. W.
Metcalfe, E. P., and Venkatesachar, B., selective absorption by excited mercury vapour, A., 615.

Metropolitan-Vickers Electrical Co., Ltd., and Merten, W. J., manufacture of non-ferrous alloys [lead bronzes], (P.), B.,

Metropolitan-Vickers Electrical Co., Ltd. See also Burch, C. R., Davis, N. R., Guy, H. L., Phillips, A., and Robinson, E. Y. Metz, L., detection of sulphides and thiosulphates by the iodinesodium azide reaction, A., 529.

testing the chemical stability of smokeless powders and explosives by measuring their hydrogen-ion concentrations, B., 962.

Metz, L. Sec also Lenze, F.

Metzger, R. See I. G. Farbenind. A.-G.

Metzger, W. H., effect of moisture content and cropping on exchangeable calcium and magnesium, with particular reference to rice soil, B., 447.

Metzger, W. H., and Janssen, G., sodium nitrate and development

of chlorosis in rice, A., 478.

Meulen, H. ter, presence of chlorine in coal, B., 929.

Meulen, H. ter, and Ravenswaay, (Mlle.) H. J., determination of cadmium in the metallic state in organic and inorganic compounds, A., 285.

Meunier, L., emulsions of fatty substances and of hydrocarbons and their industrial applications, B., 179. emulsions of fats and hydrocarbons and their industrial applic-

ation, B., 860. Meunier, L., and Guyot, R., hydrophilio properties of sthenosised

cellulosic fibres, B., 241.

"sthénosage" of viscose, B., 773.

Meuser, L. See Adams, H. S. Meuwsen, A., constitution of nitrogen sulphide,  $N_4S_4$ , A., 1252. Meves, W. See Feibelmann, R.

Mewborne, R. G., cleansing nicotine vapours, (P.), B., 37.

Mewborne, R. G., and Consumers Tobacco Co., insecticide; parasiticide, (P.), B., 1026.

Mexco, Ltd. See Scott, A. C. Mey, K. See Müller, Carl.

Meyer, A. H. See Truog, E. Meyer, C. F., and Levin, A. A., absorption spectrum of hydrogen chloride, A., 974.

Meyer, C. F. See also Bennett, W. H. Meyer, E., sparking potential in hydrogen, A., 968.

Meyer, Erich, and Heubner, W., arsine poisoning, A., 601.
Meyer, F. See Meyer, Ludwig, and N.V. Internat. Octrooibureau.

Meyer, Fritz, specific dynamic action of meat on animals receiving thyroid gland, A., 851.

Meyer, Fritz. See also Biltz, W.

Meyer, H., manufacture of steel, (P.), B., 213.

Meyer, Hans (Berlin), new derivatives of p-phenylencdiamine and their application for hair-dyeing, B., 973.

Meyer, Hans (Prague), and Bernhauer, K., alkylation of aromatic compounds, A., 1441.

Meyer, Herbert, experimental method for the measurement of molecular streams, A., 744.

Meyer, Herbert, and Agfa Ansco Corporation, combined [photographic] desensitiser and developer, (P.), B., 798.

Meyer, Herbert, and Walter, R., mercuric cyanide as desensitiser, B., 227.

Meyer, H. J. See Luck, K. von.

Meyer, H. K. Seo Scholl, R.

Meyer, H. T., intensity of the K-lines of the X-ray spectrum in relation to atomic number, A., 625.

occurrence of structure lines at the K-absorption band edge of bromine, A., 629.

Meyer, J., and Asmus, E., manufacture of porous masses from mineral substances capable of setting, (P.), B., 21. Meyer, Karl. See Kuhn, R., and Peters, K.

Meyer, Konrad, effect of external growth conditions on germination of cereals in sugar solutions, B., 1026.

Meyer, Konrad. See also Tornau, O.

Meyer, K. F., determination of the "Stauchprobe" of explosives, B., 228.

Meyer, K. F. See also Naoum, P. Meyer, K. H., chemistry of high molecular organic substances,

constitution of high molecular substances, A., 680.

chemistry of the micelle and its application to biochemical and biological problems, A., 842.

Meyer, K. H., Hopff, H., and Mark, H., constitution of starch, A., 799.

Meyer, K. H., and Mark, H., cellulose, A., 51.

Meyer, K. H. See also Brill, R., Grasselli Dyestuff Corp., I. G.

Farbenind, A.-G., and Mark, H.

Meyer, L. See Eucken, A., and Meyer, M.

Meyer, Ludwig, and Meyer, F. (Chem. Fabr. L. Meyer), dry disinfectant for seeds, (P.), B., 572.

Meyer, M., and Meyer, L. (Hüttenwerke Tempelhof A. Meyer), working-down metal residues, (P.), B., 480.

Meyer, O. Sce Böeseken, J.

Meyer, Oskar, determination of oxygen in iron and steel, B., 98. Meyer, Oswald, and Gen. Aniline Works, Inc., manufacture of salt-like compounds derived from dyestuff bases of the triarylmethane series, (P.), B., 974\*.

Meyer, R. J. See Bodenstein, M.

Meyer, W., detection of industrial spirit in pharmaceutical tinctures, B., 148.

testing of liquor cresoli saponatus D.A.B. VI., B., 188.

recognition and differentiation of acctone, methyl alcohol, and isopropyl alcohol present together in pharmaceutical preparations, B., 263.

examination of alkali iodides, B., 515.

detection of isopropyl alcohol in presence of acetone [in spirit]. B., 574.

examination of spirit of camphor, especially for the determination of camphor and alcohol, B., 870.

Meyer-Bisch, R., Bock, D., and Wohlenberg, W., anti-insulin

and external secretion of the pancreas, A., 103.

Meyerhof, O., significance of guanidinephosphoric acids (phosphagens) for muscle activity, A., 844.

distribution of argininephosphorie acid in the musculature of

invertebrates, A., 1329.

Meyerhof, O., and Burk, D., fixation of atmospheric nitrogen by Azotobacter, A., 473.

Meyerhof, O., and Lohmann, K., extraction of pyrophosphate containing iron from muscle, A., 347.

Meyerhof, O, and Schmitt, F. O, respiratory quotient of nerve at rest and during activity, A., 842.

Meyerhof, O., and Schnlz, W., respiration of non-medullated nerves, A., 587.

Meyerhofer, A. F., decomposition of salts of complex hydrofluoric acids [fluosilicates], (P.), B., 207. production of lead arsenate, (P.), B., 556.

Meyerhofer, A. F. See also Buchner, M.

Meyers, C. N., and Acree, S. F., reversible addition of ethyl alcohol to p-bromobenzonitrile catalysed by sodium, potassium, and lithium cthoxides, A., 151.

Meyers, H. H. See MacDowell, C. H.
Meylink, J. A. See Pieters, H. A. J.
Meyring, K. See Fricke, R.
Meythaler, F. See Grate, E.

Mezey, E., tannery waters, B., 405.

Mezger, R., evaluation of bituminous coals for gas works from

their analyses, B., 703. apparatus for uniformly evaporating liquids, especially for uniformly charging gases with vapours, (P.), B., 964.

Mezzadroli, G., and Babes, T., influence of active carbon and of zinc on the formation of complex aldehydes and of sugars from solutions of potassium hydrogen carbonate under the action of ultra-violet rays, A., 894.

Mezzadroli, G., and Magno, G., acetone-butyl [alcohol] fermentation and its application to molasses, B., 145, 491\*

Mezzadroli, G., and Vareton, E., action of ultra-violet rays on the formation of sugars and complex aldehydes from solutions of alkali and alkaline-earth metal hydrogen carbonates and of carbon dioxide in presence of reducing and colloidal catalysts, A., 155.

influence of metallic magnesium on the formation of formaldehyde and sugars by the action of ultra-violet rays on calcium hydrogen carbonate solutions, A., 277.

influence of radiations on the germination of seeds and the

growth of plants, A., 360. catalytic power of active carbons, before and after exhaustion,

towards hydrogen peroxide, A., 1400. ropiness in wine, B., 373, 491\*.

effect of activated carbon and of sulphur dioxide combined on juices, etc., B., 617.

purification and decoloration of cane and beet sugar juices by the combined use of sulphur dioxide and activated carbons. B., 695.

Mica Insulator Co., and Coffey, J. M., mica plate [insulating] compositions, (P.), B., 253.

Michael, W. See I. G. Farbenind. A.-G. Michael & Co., J. See Ullmann, F.

Michaelis, L., molecular sieve membranes, A., 759.

Michaelis, L., and Barron, E. S. G., biological oxidation-reduction systems. II. Reducing effect of cysteine induced by free metals, A., 405.

biological oxidation-reduction systems. IV. Cysteine complexes with metals of the iron group, A., 1011.

Michaelis, L., and Yamaguchi, S., oxidation-reduction systems of biological significance. V. Composition of oxidised cobaltcysteine complex; micro-determination of cobalt, A., 1284.

Michaelis, L. See also Abramson, H. A., Barron, E. S. G., Green, A. A., and Weech, A. A.

Michail, D., and Vancea, P., action of lachrymal fluid on cholesterolæmia and glycæmia, A., 96.

variations in the cholesterol content of organs in naphthalene intoxication, A., 215

Michailov, A. K. See Sadikov, V. S.

Michal, J. A., and Turbinator Co., Inc., mixing and grinding device, (P.), B., 543. Michalek, J. C. See Rodebush, W. H.

Michalke, M. See Krause, W. Michaud, M. D. C., and Compagnie Olivier, preservation of the yolk and white of eggs, and of a mixture of the two, (P.), B., 995

Michaux, A., total proteins (serum-albumin and serum-globulin) of the serum of scorbutic guinea-pigs; presence of albumin and hæmoglobin in urine in the final pathological state, A., 465

Micheel, F., sugar anhydrides. I. Galactosan ( $\alpha$  1:5) ( $\beta$  1:6), A., 543.

Michel, A., and Bénazet, P., chromium steel with 20% Cr. B. 131.

recovery of austenitie steels, B., 358.

Michel, G., protection of magnesium and its alloys, (P.), B.,

protection of surface of baths of easily-oxidisable metals such as magnesium, (P.), B., 726\*

Michel, G., and Berg, H. O., purification of magnesium and its alloys, (P.), B., 605

Michel-Lévy, A., and Grenet, G., relation between the increase in the magnetic susceptibility of certain rocks when heated and the modifications induced in certain of their mineral constituents, A., 420.

Michels, A., and Gibson, R. O., determination of isotherms at

high pressures, A., 128.

Michels, W. C. See Hodges, A. C.

Michie, A. C. See Davidson, W. B.

Michlin, D., vegetable oxidoreductase, A., 217.

Michlin, D., and Kopeliovitsch, P., peroxidase of phanerogams, A., 847.

Michniewski, S. See Terlichowski, F.

Mickwitz, A., selenium cells as colorimeters. II., A., 32.

Midden-Europeeische Octrooimaatschappij, production of dense carbon dioxide snow from liquid carbon dioxide, (P.), B., 1015.

Middleton, E. B. See Du Pont de Nemours & Co., E. I.

Middleton, G. See Hymas, F. C.

Midgley, C. A., and Goodwin, J. T., utilisation of molten slag and production of cast slag in a form suitable for use in roadmaking, (P.), B., 646.

Midgley, T., jun., coated spiral fractionating columns, A., 673.
Midgley, T., jun., and General Motors Corporation, cracking of hydrocarbons, (P.), B., 916.

Midgley, T., jun., and Henne, A. L., preparation of sodiumpotassium alloy, A., 661.

natural and synthetic rubber. II. Reduction of isoprene by Na-NH<sub>3</sub>. III. Dimethyloctadiene, A., 674.

natural and synthetic rubber. I. Destructive distillation of natural rubber, A., 702.

Midgley, T., jun., Hochwalt, C. A., Thomas, C. A., and General Motors Corporation, polymerisation of dienes, (P.), B., 886.

Midwest Metallurgical Corporation. See Williams, D.

Midwest Steel & Supply Co., Inc. See Jordahl, A.

Mie, G., and Hengstenberg, J., [X-ray examination of highly-

polymerised organic substances], A., 49.

Miedel, H. Sco Hauser, E. A. Mieg, W. Sec Grasselli Dyestuff Corporation.

Miehr, W., refractory materials, with special regard to the glass industry, B., 245.
Miekeley, A. See Bergmann, M.

Mienes, K. See Benrath, A.

Miermeister, A., loss of iodine and other inorganic substances from spinach in the usual cooking process, B., 575.

Miermeister, A. See also Büttner, G., and Grossfeld, J.

Miescher, K. See Soc. of Chem. Ind. in Basle.

Miesse, R. E., and New Process Metals Corporation, production of metallic casium, (P.), B., 526.

Mietzsch, F. See Schulemann, W. Migeon, M., carbonisation of low-grade fuel substances and apparatus therefor, (P.), B., 195.

Migge, A. See Meerwein, H. Mighill, T. A., evaluation of gas oils, B., 310.

Migita, M., interpretation of rearrangements of pinacols and tertiary amino-alcohols from the electron theory of valency, A., 448.

electronic conception in organic chemistry. II. Interpretation of the rearrangements of trisubstituted a-glycols, A., 675.

Migliacci, D., cause of the fluorescence of milk and of wine in ultra-violet rays, B., 146.

Mignonac, G., and De Saint-Aunay, R. V., polymerisation of acetylene by electric discharge; synthesis of dipropargyl and its isomerides, A., 537. polymerisation of ethylene by the electric discharge; synthesis

of butene and hexene, A., 1037.

Mignonac, G., and Rambeck, O. W., action of cyanogen chloride, bromide, and iodide on ethyl sodiomalonate; sy ethane- and ethylene-tetracarboxylic esters, A., 794.

Mignonac, G. See also Fabr. de Prod. Chim. Organlque de Laire. Miguet, P. L. J., treatment of coking coal with smoke and dust from reduction furnaces, (P.), B., 879.

Miguet, P. L. J., and Société Electrométallurgique de Montricher, furnace electrode, (P.), B., 441\*

electrode for electric furnaces, (P.), B., 902\*.

Mika, J., microchemical permanganate determinations, A., 1260. filtering vessel, A., 1415.

Miki, E., tensile strength of mixtures of Portland and alumina cements, B., 96.

Miki, K. See Karrer, P.

Miko, G. von, purification of ethyl acetate for the evaluation of opium and opium preparations, B., 956.

Miksch, R. See Moser, L. Mikšic, J., sugars, A., 49.

Mikumo, J., soap solutions. VI. Composition of the substances adsorbed by various adsorbents, A., 641.

Milan, E. F., dissociation pressure of vanadium pentoxide, A., 650.

Milanesi, E. See Chistoni, A.

Milas, N. A., polymerisation. I. Polymerisation of styrene, A.,

homogeneous catalysis, A., 1019.

auto-oxidations, A., 1019. Miles, E. H., and Reilly, G., preparation of vegetable food, (P.), B., 536.

Miles, F. D., and Craik, J., constitution of nitrated cellulose, A.,

Miles, H. D., and Buffalo Foundry & Machine Co., drying apparatus, (P.), B., 875.

Miles, J., gas burners, (P.), B., 971.

Miles, J. B. See Rule, H. G.

Miles, J. B., jun., dielectric constant and electric moment of some alcohol vapours, A., 1365.

Mill, C. K., and Linderström-Lang, K., proteolytic enzymes in green malt, A., 957.

Millar, R. W., heat capacity at low temperatures of zinc oxide

and of cadmium oxide, A., 21.

heat capacities at low temperatures of the oxides of tin and lead, A., 251.

heat capacities at low temperatures of "ferrous oxide," mag-

nctite, and cuprous and cupric oxides, A., 251.

Millar, R. W., and Sullivan, J. D., thermodynamic properties of oxygen and nitrogen, B., 16.

Millar, W. S., treatment of oxide iron ores, (P.), B., 821.

Millard, R. B., [laboratory] filter, (P.), B., 1036.

Miller, A. B., and Robrbach, K. L., atmospheric oxidation of esters of  $\beta$ -eleostearic acid with monohydric alcohols, B.,

Miller, A. E., and Sinclair Refining Co., distillation [cracking] of

[heavy petroleum] oil, (P.), B., 881. Miller, A. L. See Ault & Wiborg Co.

Miller, (Miss) C. C., slow oxidation of phosphorus. I. Inhibition of the glow of phosphorus by phosphorous oxide. II. Oxidation products of phosphorus and phosphorous oxide, A., 1155. Miller, C. D., viscosimeter, (P.), B., 1001.

Miller, E. B., and Silica Gel Corporation, refrigeration, (P.), B.,

Miller, E. B. Sec also Silica Gel Corp.
Miller, E. G., jun., effect of hydrogen carbonate ions on the swelling of gelatin, A., 1383.

Miller, E, J, adsorption from solution by ash-free adsorbent charcoal, A., 256.

Miller, E. R., alkaloids of Bocconia frutescens, L., A., 477.

Miller, G. W., effect of repeated reclaiming of rubber, B., 28. Miller, G. W. See also Groff, F.

Miller, H., liquid-clarifying apparatus, (P.), B., 928. Miller, H. L., corrosion-resistant ferrous alloys and their manu-

facture, (P.), B., 329.

Miller, H. N., Engle, E. W., and Fansteel Products Co., Inc., alternating-current rectifier, (P.), B., 688.

Miller, H. N., and Fansteel Products, Co., Inc., semi-solid electric conductor, (P.), B., 782. Miller, J. M. Sco Theis, E. R.

Miller, L. B., retention of phosphate by hydrated alumina, and its bearing on phosphate in the soil solution, B., 142.

Miller, L. B., and Witt, J. C., solubility of calcium hydroxide, A., 388.

Miller, P. F., and De Laval Separator Co., apparatus for reclaiming used lubricating oil, (P.), B., 88\*.

Miller, R. C. Seo Smythe, C. V., and Thompson, T. G.

Miller, S., electrically conductive antimony mirrors on glass, A., 1262.

Miller, S. F. See Downes, J. R.

Miller, S. P., and Barrett Co., rubber and resin compound, (P.), B., 30.

Miller, S. P. See also Barrett Co. Miller, V. See Oldright, G. L.

Miller, W. J., feeding of [molten] glass, (P.), B., 645. manufacture of [moulded] pottery ware, (P.), B., 777.

[apparatus for] manufacture of [moulded] pottery, (P.), B., 777. Milles, G. See Petersen, W. F.

Millet, H., electrometric determination of small quantities of lead ion, A., 531.

reaction of the blood in cancer, A., 840.

excretion of lead in urine, A., 1192.

Millet, H., and Jowett, M., solubilities of lead phosphates, A., 650. Millet, H. See also Jowett, M.

Milligan, A. G., regional absorption of dyes by growing crystals, A., 1231.

Milligan, A. G. See also Crennell, J. T.
Millikan, R. A., and Lauritsen, C. C., dependence of electron emission from metals on field strengths and temperatures, A., 619.

Millington, A. E., treatment of fibres, (P.), B., 554.
Millington, P. E. See Adkins, H.
Millner, T. W. See Dokkenwadel, F. G.

Millott, J. N. See Prideaux, E. R. B. Mills, A. E. See Galbraith, W. T.

Mills, A.E.

Mills, A. K. See McKenzic, A.

Mills, C. A., treatment of diabetes with vitamin-B, A., 1482.

Mills, C. P., construction and operation of Kathner [steel]

normalising furnaces, B., 213.
Mills, E. S. See Rabinovitsch, I. M.

Mills, L. D., Crowe, T. B., and Merrill Co., recovery of cyanide from solutions, (P.), B., 681.

Mills, O. L., manufacture of tungsten alloys, (P.), B., 822. Mills, O. L., and Mills Alloys, Inc., electric are furnace, (P.),

B., 782. Mills, R. G. See Westman, A. E. R. Mills, V. C. See Englis, D. T.

Mills Alloys, Inc. See Mills, O. L. Millspaugh, W. H., newsprint paper, (P.), B., 204.

Millward, W., regenerative furnace, (P.), B., 191.

Milne, É. A., absolute magnitude effects in stellar spectra,

ionisation in stellar atmospheres. I. Generalised Saha formulæ, maximum intensities, and the determination of the coefficient of opacity, A., 223.

ionisation in stellar atmospheres. II. Absolute magnitude effects, A., 223.

theoretical contours of absorption lines in stellar atmospheres, A., 223.

Milne, G., cobaltinitrite (volumetric) method of determining potassium in soil extracts, B., 731.

Milobedzki, T., and Boratyński, K., acidimetry of phosphorus acid in presence of indicators, A., 414.

Milobedzki, T., and Krakowiecki, S., action of bromine on phos-

phorus trichloride, A., 411. Milobedzki, T., and Walczyńska, J., synthesis of hypophosphoric acid, A., 159.

Milone, M., dioximes. LIII., A., 1072.

Milone, M. See also Ponzio, G.

Milski, A. V., determination of maize flour in mixtures with

wheat flour, B., 450.
Miithaler, (Frl.) V., optical proporties of turbid solutions containing non-metallic particles and the Pulfrich step-photometer, A., 505.

Milward-Liquier, (Mme.), and Deschamps, R., rotatory dispersion of solutions of nicotine in the ultra-violet, A., 25.

Mimosa A.-G., and Naewiger, W., photographic films, (P.), B., 960 Minaev, M., and Fedorov, B., meso-derivatives of anthracene and of 9:9'-dianthranyl, A., 1436.

Minaev, M. G. See Larvex Corp.
Minaev, V. I., and Fedorov, B., meso-derivatives of anthracene and dianthryl, A., 803.

V., B., 936. synthesis of alizarin.

Minami, Y., analysis of allanite from Hagata-Mura, Iyo Province, A., 1264.

Minatoya, S., and Ishiguro, K., gutta-percha-like substance obtained from Tu-Chung, B., 924.

Mindalev, Z., volumetrio determination of sulphate ion, A., 162. rapid calibration of burettes, A., 167.

Mine & Smelter Supply Co. Sce Willard, C. G.

Miner, C. G., manufacture of aluminium chloride, (P.), B., 433.

manufacture of phosphorus nitride, (P.), B., 681.

Miner, C. G., and Phosphorus Hydrogen Co., making oxy-compounds of phosphorus [and fertiliser], (P.), B., 17.

Mineral Aktien-Gesellschaft, glazing of artificial stone surfaces, (P.), B., 209.

Mineral Aktien-Gesellschaft Brig. See Plauson, H.

Minerals Separation North American Corporation. See Lewis, C. P., Martin, R. B., and Nutter, E. H.

Mines, H. M., and Curd, F., phosphorescent or luminous mass or compounds, (P.), B., 644\*.

Mines Department, Safety in Mines Research Board, testing of explosives for use in flory coal mines, B., 455.

acetate, A., 1272.

Mingoia, Q., now syntheses of organic solonium compounds, A., 178.

reactions between phonanthraquinone and magnesylpyrroles, A., 197.

indole derivatives of mixed function, A., 579.

Minimax Akt.-Ges. See Thiecke, J.

Ministry of Health Committee, methods of chemical analysis as

applied to sewage and sewage effluents, B., 998.

Minkowski, R., dependence of the intensity distribution in spectral lines broadened by gas pressure on the nature of the gas employed, A., 860.

paramagnetic rotation of the plane of polarisation in the neighbourhood of absorption lines, A., 981.

Minkowski, R. See also Gordon, W., and Ladenburg, R.

Minnich, W. See Soc. of Chem. Ind. in Basic.
Minnis, W., thiophen analogues of di-, tri-, and totra-phenylmethane compounds, A., 1078.

Minot, M., improvement in method of benzol recovery from cokeoven gas, B., 310.

Minovici, S., Nenitzescu, C. D., and Angelescn, B., derivatives of 2:5-diphenyloxazole, A., 455.

Minovici, S., and Vanghelovici, M., oxidation of cholesterol with chromic acid, A., 440, 554\*.

Minsaas, J. See Riiber, C. N. Minter, C. C., equilibrium combustion of a mixture of carbon

monoxide and hydrogen, B., 156.

Minunni, G. [with Ottaviano, I., and Spina, V.], syntheses in the amino-acid group. III. Behaviour of a arylideneaminocinnamo-β-lactones with phenylhydrazine and with hydroxylamine; new method for the replacement of hydrogen by the amino-group, A., 556.

Minunni, G., and D'Urso, S., syntheses of heterocyclic nitrogen nuclei. II. 1:3:5-Triarylpyrazole-4-carboxylic acids and 1:3:5-triarylpyrazolcs from aldehydchydrazones and ethyl benzoylacetate, A., 196.

arylidene 2:4-diphenylsemicarbazones from aldehydephenylhydrazones and phonylcarbimide, A., 314.

Minunni, G., and D'Urso, S. [with Guglielmino, S., Salanitro, P., Torrisi, D., and Vasta, M.], syntheses of heterocyclic nitrogen nuclei. III. Triaryl derivatives of 1:2:4-triazole from arylidene

[aromatic aldehyde] 2:4-diphenylsemicarbazones, A., 332. Minnnni, G., and D'Urso, S. [with Ottaviano, G., and Bellecci, V.], syntheses in the amino-acid group. II. a-Anisylideneamino- $\beta$ -

lactones, A., 555.

Miropolski, L. M., baryta in the jurassic and crotaceous deposits of the Tschuvaschki Republic, A., 420.

Mirsky, A. E., and Anson, M. L., glass electrode; its use in determining  $p_H$ , A., 528.

pyridine-hæmochromogen, A., 587.

Mirsky, A. E. See also Anson, M. L., and Cohn, A. E.

Mirvish, L., nature of the rickets-producing factor in cereals, A., 1203.

Misawa, H., so-called water intoxication, A., 1195.

Misch, O., gas producers, (P.), B., 347.

Misciattelli, P., separation of thorium from uranium by means of ether, A., 671.

Mishima, T. See Nagaoka, H.

Mislowitzer, E., enzymie proteolysis. IV., A., 353. Mislowitzer, E. Sco also Rona, P.

Mississippi Glass Co., production of sheet glass, (P.), B., 852.

Misutsch, K., amidosulphonic acid as primary standard in volumetrie analysis, A., 284.

Mitchell, A. C. G., theory of electron scattering in gases, A., 969. Mitchell, A. E., and Imperial Chemical Industries, Ltd., production of salts, (P.), B., 516.

Mitchell, A. E., Smith, C. C., and Imperial Chemical Industries, Ltd., production of nitric acid, (P.), B., 642.

Mitchell, A. G. See McKenzie, A. Mitchell, C. See Germuth, F. G. Mitchell, D. P., change of frequency of X-rays scattered by bound

olectrons, A., 985.
Mitchell, H. C., preparation of paper and other similar surfaces, (P.), B., 51.

Mitchell, H. H., Hamilton, T. S., and Haines, W. T., connective

tissue content of beef muscle, B., 535. Mitchell, H. H., Kammlade, W. G., and Hamilton, T. S., relative onergy value of lucerne, clover, and timothy hay for the maintenance of sheep, B., 906.

Mitchell, H. S., nutritive value of the garbanza pea, A., 1496.

Mitchell, J. Sce Ward, P. J.

Mitchell, J. A. M. W. See Imperial Chem. Industries, Ltd.

Mitchell, J. H., iodine in S. Carolina, A., 1418.

Mitchell, R. W., electrochemical oxidation of toluene, B., 972.

Mitchell, S., rotation dispersion and circular dichroism of caryophyllene nitrosite, A., 122.

hydrolysis of d-glucosides of d- and l-methyl-n-hexylcarbinol with omulsin, A., 956

Mitchell, T. See Hugh, W. E.

Mitchell, V. E. S., and Partington, J. R., influence of ethyl ether and of dimethylpyrone on the availability of hydrogen chloride in alcoholic solution, A., 1011.

Mitchell, W. M., applications of stainless iron in the nitric acid industry, B., 131.

stainless iron nitric acid equipment, B., 559.

Mitchell, W. M., and Electro Metallurgical Co., [ferrous metal] casting having chromium alloy surface, (P.), B., 922. Mitinsky, A., outectic cast iron, B., 357.

Mittin, L. vel L. See Goralski, M.
Mitra, N. N. See Sen, K. C.
Mitra, S. K., and Phukan, L. N., effects of hydrogen-ion concentration on rice cultures, B., 488.

Mitra, S. K., and Rakshit, H., refraction of light waves by electrons, A., 619.

Mitsche, R. Seo Keil, O. von.

Mitscherlich, E. A., the second approximation of the theory of growth factors, B., 184.

Mitsuhashi, I. See Uyeda, Yoshisuke.
Mitsuknri, S., velocity of reaction between sodium hydroxido solution and carbon dioxide, A., 1149.

Mitsukuri, S., and Hara, K., specific heats of acetone, methyl, ethyl, and n-propyl alcohols at low temperatures, A., 386, 635.

Mitsukuri, S., and Kitano, Y., densities of n-propyl and isobutyl

alcohols at low temperatures, A., 387.

Mitsukuri, S., and Tonomura, T., viscosities of ethyl, n-propyl and isobutyl alcohols at low temperatures, A., 387.

Mitta-Donhoffer, M. See Donhoffer, S.

Mittasch, A., activator, promoter, or accelerator? A., 273.

Mittasch, A., and Frankenburger, W., reactivity of iron vapour with molecular nitrogen, A., 282.

Mittasch, A., Kuss, E., and Emert, O., decomposition of ammonia by iron, A., 273.
Mittasch, A. See also I. G. Farbenind. A.-G.

Mittelstaedt, O. See Brendel, B.

Mitter, P. C., and Biswas, H., inductive method for study of natural products. I. Naturally occurring anthraquinone derivatives, A., 319.

Mitter, P. C., and Sen, A. K., munjistin. I., A., 70.

Mittlestedt, A., reducing substances of the blood in lead poisoning, A., 215.

Miura, K. See Taketomi, N.

Miura, M., oryzatoxin theory, A., 851.

vitamin-C content of pasteurised milk, A., 1111.

antiscorbutic potency of infusions of Japanese green tea, A., 1111.

Miyagawa, I., Yamada, Minoru, and Inaba, J., spontaneous combustion of [Japanese] coal, B., 763.

Miyaguchi, T. See Fukui, M.

Miyaji, K., tyramine as constituent of a Japanese vinegar, B., 953.

Miyajima, S. Sco Takei, S.

Miyake, I. See Kirkpatrick, P.

Miyama, R., carbohydrate metabolism. I. Micro-determination of dextrose, A., 1190.

Miyamoto, S., oxidation by air of stannous chloride in sulphuric acid solution, and the dissolution velocity of oxygen in sulphuric acid solutions, A., 404.

oxidation of ferrous hydroxide by air, A., 518.

oxidation of sodium sulphite by air in the presence of ferrous hydroxide and a theory of negative induced reaction, A., 1020. Miyanishi, M., nature of streamers in electric sparks, A., 228. Miyanishi, M. See also Kimura, M.

Miyata, S. See Hosoya, S.

Mizushima, S., dielectric constants and absorption indices of

several alcohols for short electric waves, A., 380.

Mizushima, S., and Yamada, T., anti-oxygenic effects of sulphur and selenium on refined transformer oil and paraffin wax,

Mladenović, M., and Lieb, H., influence of the fixation of organs by formaldehyde on the extraction of lipins, A., 591.

Mladenović, M. See also Lieb, H.

Mládkova, H. See Bureš, E.

Miedziejovski, A. B., thermodynamic potential curves of fused mixtures in which compound formation occurs, A., 130.

Mnookin, N. M. See Patrick, J. C.

Mochnatsch, IV., origin and fate of creatine and creatinine, A., 213.

Modern, F. Möbius, E. See Wernicke, R.

See Le Blanc, M.

Mölbach, E. B., centrifugal separators, (P.), B., 498, 762\*.

Möller, C., radioactive decomposition and relativity theory, A., 1125.

Möller, H., and Reis, A., nature of interference lines in X-ray photographs of many crystalline materials. I., A., 246, 492. intensity, sharpness, and reproducibility of Debye-Scherrer lines, A., 985.

crystal structure of pentaerythrityl tetra-acetate, A., 988.

Moeller, O. See Jones, D. B.

Möller, R., Kerr constant for nitrobenzene, A., 242.

Möller, W., and Kreth, W., preparation of solutions of hydro-fluosilicic acid, (P.), B., 776\*.

Möllering, H. See Waser, E. B. H.

Moelwyn-Hughes, E. A., kinetics of the hydrolysis of certain glucosides. II. Trehalose, a-methylglucoside, and tetramethyl-a-methylglucoside, A., 405.

reactivity of dextrose in presence of hydrochloric acid. II.,

A., 1043. kinetics of the hydrolysis of certain glucosides. III.  $\beta$ -Methylglucoside, cellobiose, melibiose, and turanose, A., 1244.

Moesveld, A. L. T., the Majorana thermal effect, A., 128, 497.

influence of solvent on rotatory dispersion, A., 759.

Moesveld, A. L. T., and De Messter, W. A. T., calculation of velocity coefficients. II., A., 146.
piezochemical studies. XXIX. Effect of pressure on reaction

velocity; part played by the medium in homogeneous liquid systems, A., 149.

Möttig, H. See Moldenhauer, W.

Mohammad, S. See Dunnleliff, H. B. Mohler, F. L., and Boeckner, C., recombination spectra of ions and electrons in cæsium and helium, A., 481

photo-ionisation of some alkali vapours, A., 1212.
Mohler, F. L., Boeckner, C., Stair, R., and Coblentz, W. W., photo-ionisation of easium vapour, A., 1356.

Mohlman, F. W., and Beck, A. J., disposal of industrial wastes,

Mohr, O., improvements in the Imhoff sewage-settling tank, B., 1033.

Mohr, R. See Patent-Treuhand-Ges. f. elektr. Glühlampen m.b.H.

Mohs, K., and Kühl, H., effect of flour on the fermentative power of yeast, B., 954.

Moir, J., colour and chemical constitution. XXIV. Complete investigation of the triphenylcarbinol or "aniline" dyes, A., 183

cholesterol and phytosterol and the spectroscopy of the colour reactions of the sterols in general, A., 554.

Moklowska, A., chemical composition of the hamolymph of Deilephila euphorbia larva, A., 1333.

Mokruschin, S. G., partition coefficient of infinitely soluble substances, A., 389.

Moldenhaner, W. (with Burger, M.), monobromoamine, A., 897. Moldenhauer, W. [with Ewald, K. F. A., and Roth, O.], analysis by electrolysis with a mercury cathode, A., 531.

Moldenhauer, W. [with Möttig, H.], combination of alkali metals and nitrogen under the influence of electrical discharges, A., 1247.

Moldenhauer, W. [with Zimmermann, A.], union of nitrogen and sulphur under the influence of electrical discharges, A., 1252.

Moldenke, R., and New Process Multi-Castings Co., using direct metal from blast furnaces, (P.), B., 24\*.

Moles, E., and Batuecas, T., mass of the normal litre of ammonia, A., 1373.

Moles, E., and Pire, L. R., pipette for exact gas analysis, A., 904. Moles, E. See also Pire, L. R., and Viana, J. G. Moll, H., standard method for examination of [alkali] ferro-

cyanides, A., 165.

Molle, O., and Ateliers J. Hanrez, Société Anonyme, ovens for ceramic products, (P.), B., 394. Moloney,  $\bar{P}$ . J., and Taylor, E. M., fractionation of diphtheria

antitoxio plasmas, A., 1201. Molyavko-Vyssotski, P. See Loewe, Siegfried.

Molybdenum Corporation of America. See Phillips, W. H. Molz, J., and Babcock & Wilcox Co., ring mill, (P.), B., 116. pulveriser, (P.), B., 626.

Mombonr, A. See Mayer, Fritz.

Monaghan, G., [corrugated] anodes for electrolytic baths [for cleaning silver ware], (P.), B., 783.

Monaghan, T. S., and Olmsted, G. E., dust separator and collector,

(P.), B., 838.

Monaka, M., soap. VIII. Adsorption of soap at the contact surface of two liquid phases, A., 641.

Monasterio, G., tryptoporphyrin, A., 1325. so-called vitamin-A reactions, A., 1343.

Monasterio, G. Sce also Frankel, S

Monckton, P. H. P., and Cross, W. H., [electric] muffle furnace, (P.), B., 858.

Mond, R., and Hoffmann, Friedrich, artificial membranes clectively permeable to anions, A., 503. Mond, R. L., metal carbonyls, B., 471.

Mondain, C. See Douris, R. Mondal, K. See Seu, H. K.

Moness, E., and Christiansen, W. G., assimilation of vitamin-A when dissolved in liquid paraffin, A., 1496.
Mong, L. E. See Heindl, R. A.

Monham, C. A., and Firth, E. G., carbide cartridge for use in acetylene gas lamps, (P.), B., 509. Monheim, J. See Lange, E.

Monk, G. S., and Mulliken, R. S., fine structure in the helium band

lines, A., 964. Monk, R. H., preparation of titanium oxide, (P.), B., 433.

Monrad, C. C., correlation of freezing points and vapour pressures of aqueous solutions by Dühring's rule, B., 229.

Monrad, C. C., and Badger, W. L., b. p. of electrolytic caustic

solutions, B., 169.

Monroe, K. P. See Du Pont de Nemours & Co., E. J.

Montagne, P. See Jolibois, P.

Montan & Industrialwerke vorm. J. D. Starck, production of citric acid by fermentation, (P.), B., 1029. Montank, I. A. Sec Janzig, A. C.

Monteeatini Soc. Gen. per l'Ind. Mineraria ed Agricola, and Fanser, G., electrolytic cells [for producing hydrogen and oxygen], (P.), B., 946. manufacture of ammonium salts, (P.), B., 978.

Montel, (Mile.) E., penetration of polonium into lead, A., 737. Monteleone, J. Ser Hultman, E. W.

192 INDEX OF AUTHORS. Montgomerie, J. A., production of bituminous emulsions, (P.), B., 46, 314, 396. alkaloids by acidified hydrogen peroxide, A., 1089. Montgomery, C. G. See Frayne, J. G. Montgomery, J. M. Sec Hoover, C. P. A., 1090. Montgomery, R. J., manufacture of fused bifocal spectacle lenses, other materials, (P.), B., 320. B., 473. Montgomery,  $S.\ A.$  See Payne,  $E.\ H.$  Montgomery,  $W.\ B.$  See Gasoline Products Co. Morey, G. W., manufacture of tribarium aluminate, (P.), B., 54. Morgan, A. F., and Field, A., effect of drying and of sulphur dioxide on antiscorbutic property of fruits, A., 960.

Morgan, B. G. E. See Coward, K. H.

Morgan, D. P. See Holmes, O. W.

Morgan, F. L. See Ellis, W. C. Monti, (Signa.) L. Sec Bargellini, G. Montignie, E., cholesterol. V., A., 312. cholesterol and its relations with the terpenes, A., 440. action of chlorine compounds on cholesterol. VII., A., 809. Morgan, G., [flanged] annealing pot, (P.), B., 649. Morgan, G. T., and Burgess, H., interaction of tellurium tetraaction of ultra-violet light on certain inorganic compounds, A., 1152, 1248. antioxygenic action of cholesterol and ergosterol. IX., chloride and dimethylaniline, A., 835. A., 1249, action of cinnamic acid on cholesterol; a new isomeride of cholesterol, A., 1292. oxychloride and phenols, A., 202. irradiated sterols, A., 1292. Montillon, G. H. See Brewer, R. E. Montoro, V., supposed seaquisulphide of molybdenum, A., 664.
 Montû, M. C., cause of the thermo-triboelectric anomaly of mercury, A., 1136. pentanc, A., 1472. (P.), B., 316.

Morgan, G. T., and Coulson, E. A., synthesis of anthracene homologues. I. 2:6- and 2:7-Dimethylanthracenes, A., 1436. Montupet, A., concentrating or distilling apparatus, (P.), B., Moody, A. H., and Stevens, G. E., Orsat absorption tube, B., resins, (P.), B., 863.
Morgan, G. T., and Harrison, H. A., manufacture of acenaphthene Mooney, R. B., and Ludlam, E. B., thermal equilibrium between ethylene, iodine, and ethylene di-iodide, A., 766. decomposition of ethylene by ultra-violet light, A., 1023. derivatives, (P.), B., 276. Moore, B., fractional separation, grading, and sizing of solid materials in the form of lumps, granular particles, and powders, manufacture of synthetic resins, (P.), B., 1023. and the separation of the components of a mixture of different solid materials, (P.), B., 800. measurements, A., 245. Moore, C. E., drying cracks in firebricks, B., 518. Moore, C. E. See also Dunham, T., jun., and St. John, C. E. and its distillates, (P.), B., 385. Moore, C. N. See Knudson, A. distillates, (P.), B., 1006. Moore, E. K. See Highberger, J. H., and McLaughlin, G. D. Moore, J. W., Lamble, A., and Imperial Chemical Industries, Ltd., manufacture of bleaching powder, (P.), B., 851.

Moore, J. W., Polack, W. G., and Imperial Chemical Industries. temperature tar, B., 156. Morgan, G. T., and Taylor, R., manufacture of aldehydes and Ltd., manufacture of ammonium chloride crystals, (P.), B., 851\*. Moore, P. See Hartzell, A. Morgan, J. S., heating of materials, (P.), B., 457. Moore, T., vitamin-A and carotin; association of vitamin-A

activity with carotin in the carrot root, A., 1202. relation of carotin to vitamin-A., A., 1343.

Moore, T. See also Harris, L. J.

Moore, T. S., Boyle, M., and Thorn, V. M., N-substituted derivatives of piperazine and ethylenediamine. I. Preparation of N-mono-substituted derivatives, A., 331.

Moore, W., fumigant, (P.), B., 700.

Moore, W., Buc, H. E., and Standard Oil Development Co., insect repellent, (P.), B., 951.

Moore, W. A. See Du Pont de Nemours & Co., E. I. Moore, W. E., electric [are] furnace, (P.), B., 687.

Moorshead, T. C. See United Glass Bottle Manufrs., Ltd. Moorshead, W. A.

See United Glass Bottle Manufrs., Ltd. Mooy, H. H. See De Smedt, J.

Moraczewski, W. von, and Hamerski, E., swelling of gelatin,

A., 880. Moran, R. C., and Vacuum Oil Co., desulphurising hydrocarbon

oils, (P.), B., 46.

Moran, T., critical temperature of freezing; living muscle,

A., 1102.

low-temperature preservation of foodstuffs, B., 1030.

Moran, W. G., two simple methods of purifying radium emanation, A., 371.

Morani, V., determination of copper in commercial copper sulphate, B., 128. essential oil of Salvia officinalis, L., B., 622.

Moravek, V., diffusion in gels, A., 1235. Moravek, V. See also Lloyd, F. E.

Moraw, H. O., mercuric iodide determination in tablets, B., 35. Morawski, F., gasification of coal in producers, B., 421.

Morch, J. R., standardisation of thyroid preparations, A., 959.

Mordey, W. M., electromagnetic separation of concentration of minerals, (P.), B., 901\*.
 Mordkovitsch, M. See Rosenblatt, M.

Morehouse, C. A., electrical conductivity of kerosene and gasoline as a function of the temperature, B., 216.

Morel, A., Leulier, A., and Denoyel, P., bromination of natural

bromination of novocaine by acidified hydrogen peroxide,

Moreton, C. J., and "Prufix," Ltd., waterproofing of textile and

interactions of basic tellurium chloride and the cresols, A., 1473. Morgan, G. T., and Burstall, F. H., interactions of selenium

heterocyclic systems containing selenium. I. cycloSeleno-butane (tetrahydroselenophen), A., 834.

heterocyclic systems containing sclenium. II. cycloScleno-

manufacture of metallic compounds of ethylenethiocarbamide,

Morgan, G. T., and Drummond, A. A., manufacture of synthetic

direct cotton dyes from 2:7-diaminofluorene, B., 710.

Morgan, G. T., and Holmes, E., higher fatty acids. III. X-Ray

Morgan, G. T., and Pratt, D. D., treatment of low-temperature tar

separation of the constituents of low-temperature tar and its

Morgan, G. T., Pratt, D. D., and Ross, J., chemical study of low-

alcohols [from carbon monoxide and hydrogen], (P.), B., 670.

formation of agglomerates or aggregates from pulverised materials, (P.), B., 458.

Morgan, J. S., and Newbould & Partners, Ltd., M., physical

or chemical treatment of gases with solid materials, (P.), B., 1001. Morgan, J. W. See Harkins, W. D. Morgan, P. B., gas-producing plant, (P.), B., 196.

Morgan, R. S., and MacLennan, K., fluorescence of some fats containing vitamin-A, A., 103. Morgan, S. C. See Boyle, R. W.

Morgan Construction Co., and Hult, P. S., gas producers, (P.), B., 631.

Morgan Construction Co. See also Isley, G. H.

Morgen, R. A., use of internal pressure in metallic systems;
system lead-antimony-copper, A., 884.

Morgen, R. A., Yard, W. S., Rosenstein, L., and Koppers Co.,

gas purification and regenerating sulphided alkaline solutions, (P.), B., 1007\*.

Morgenroth, K. See Fischer, Hans.

Morgenstern, M., process for obtaining lubricating oils and vaseline from petroleum residues, B., 272.

Morgulis, S., calcium and potassium contents of the blood-serum of fasting dogs, A., 838.

creatine-creatinine excretion during fasting, A., 1195.

Morgulis, S., and Perley, A. M., serum-calcium of cats during fasting, A., 954.

Mori, H. See Torii & Co., Ltd.

Mori, S. See Isobe, H.

Mori, T. See Levene, P. A.

Moriarty, J. J., and Kerr, J. H. S., reclamation of rubber, (P.), B., 530.

Moriarty, M. See Hamilton, B. Morimoto, S., fixing a thin layer of sponge rubber to the surface of india rubber goods, (P.), B., 531.

Morin, W. T., and Pacific Abrasive Supply Co., dryer, (P.), B., 579. Morita, T. See Uyeda, Yoshisuke.

Mork, E., quality of pine wood, with special reference to wood for grinding and paper-making, B., 49.

Morlet, E., copper-aluminium [alloys] containing tin or cobalt, A., 995.

Morley, J. P. Sco Bastian-Morley Co.

Moro, P., manufacture of cellulose xanthate, (P.), B., 14\*.

Morowicz, J., chemical composition of nepheline, A., 45. Morozova, A. I. See Laschtschenko, P. N.

Morrell, J. C., activation of carbon, (P.), B., 880.

Morrell, J. C., Benner, H. P., and Universal Oil Products Co., prevention of substantial corrosion in hydrocarbon oil-treating [cracking] apparatus, (P.), B., 881.

Morrell, J. C., and Egloff, G., motor fuels and other products from

the cracking of wood tars., B., 583.

Morrell, J. C., and Faragher, W. F., ceramic coatings; an outcome of corrosion difficulties in oil cracking, B., 1003.

Morrell, J. C., and Universal Oil Products Co., treating hydrocarbon oil, (P.), B., 744.

treatment of residual [petroleum] oils, (P.), B., 744. Morrell, J. C. See also Egloff, G., and Faragher, W. F.

Morrell, R. S., and Marks, S., drying of [fatty] oils, B., 860. Morrell, R. S. See also Marks, S.

Morrell, W., compound for hardening metals, (P.), B., 399.

Morris, A. A. See Chattaway, F. D. Morris, A. S., and Cresson-Morris Co., treatment of [vegetable] oils, (P.), B., 903.

Morris, E. See Wilder, F. L.
Morris, H. N., printing ink for producing designs [in colour] on rubber or other similar materials, (P.), B., 651\*.

Morris, R. H., plant soil, (P.), B., 694.

Morris, V. N., determination of ethylene by absorption in a solution of silver nitrate, A., 948.

Morris-Jones, W. See Grime, G.

Morris Motors (1926), Ltd., and Smith, A., production of foundry

moulds, (P.), B., 480.

Morrison, C. F., and Morrison-Mertins, Inc., dryer, (P.), B., 307.

Morrison, F. R. See Penfold, A. R.

Morrison, G. O., and Canadian Electro Products Co., Ltd., continuous manufacture of vinyl esters, (P.), B., 746.

Morrison, I. F. See Cameron, A. E. Morrison-Mertins, Inc. See Morrison, C. F.

Morrow, J. B., coal-oil burners, (P.), B., 314. Morrow, M. B. See Williams, O. B.

Morse, F. W., mineral constituents of cranberries, A., 477.

effect of heat on malic acid, A., 679. Morse, P. M., diatomic molecules according to the wave mechanics.

II. Vibrational levels, A., 975. Morse, P. M., and Stueckelberg, E. C. G., diatomic molecules according to the wave mechanics. I. Electronic levels of the hydrogen molecular ion, A., 973.

Morse, P. M. See also Gurney, R. W. Morse, S. See Fricke, H.

Morterud, E., operation of pulp digestors, (P.), B., 390. apparatus for evaporation of liquids, (P.), B., 965\*.

Mortimer, C. W., performing [exothermic] chemical reactions

[between gases], (P.), B., 40. Morton, D. S., distribution of acctone through a rubber membrane, A., 502.

photochemical oxidation with potassium dichromate, A., 1023.

Morton, D. S. See also Bancroft, W. D. Morton, E. A. See Courtaulds, Ltd.

Morton, J. See Morton, J. W. Morton, J. W., and Morton, J. W., and Morton, J., beating and mixing of liquids or semi-liquids, (P.), B., 1036.

Morton, R. A., radiation in connexion with essential oils and perfumery chemicals, B., 835.

Morton, R. A. See also Drummond, J. C., and Gillam, A. E.

Morton, W. A. See Amsler Morton Co.

Morton & Co., Ltd., R., and Robinson, P., apparatus for heating liquids by steam, (P.), B., 627.

Mosby, D. H. See Brit. Celanese, Ltd. Moscardo, A. See Fernández, O. Moschel, W. Seo I. G. Farbenind. A.-G.

Moseley & Sons, Ltd., D., and Nield, A., manufacture of compound glass sheets, (P.), B., 776.

Mosendz, L., berry-juice indicator, A., 666.

Moser,  $H_{\cdot}$ , triple point of water as a fixed point on the temperature scale, A., 497.

Moser, H. See also Brunner, K.

Moser, L., extension of methods of gravimetric analysis, A., 1410. Moser, L. [with Miksoh, R.], simple micro-analytical separation of chlorine and bromine, A., 1255.

Moser, L., and Brandl, O., determination and separation of rare metals from other metals. XIII. Gravimetric analysis of vanadium and two new methods for its determination, A., 415.

Moser, L., and Brukl, A., determination and separation of rare metals from other metals. XV. Determination of gallium. II.,

Moser, L., and List, F., determination and separation of rare metals from other metals. XIV. Separation of beryllium from the alkaline-earth metals and the metals of the ammonium sulphide and arsenic groups, A., 415.

Moser, L., and Schutt, K., determination and separation of rare metals from other metals. XII. Separation of lithium from

potassium, sodium, and magnesium, A., 414.

Moses, F. D., gas apparatus, (P.), B., 969.

Moses, K. L., treatment of highly-porous paper-like material, (P.), B., 774.

Mosettig, E., action of diazomethane on piperonal. II., A., 814.

Mosettig, E., and Jovanović, L., action of diazomethane on aromatic ketones, A., 1461.

Mosharrafa, A. M., motion of a Lorentz electron as a wave phenomenon, A., 1358.

Mosier, E. C. See Christman, A. A. Moskowitz, S. Sce Hill, A. E.

Moss, H. See King, R. O. Moss, J. E., and Knapp, A. W., measurement of the strength of sunlight, A., 967.

Moss, W. L. See Reeson, J. N.
Moszew, J. See Dziewoński, K.
Mote, J. H. See Yoe, J. H.
Motley, L., [conveying] means for waterproofing sacks, bags, etc.,
(P.), B., 470.

Motsinger, A. V., stirrer from [motor-car] windscreen wiper, A., 419.

Mott, N. F., elastic collisions of electrons with helium, A., 620. scattering of fast electrons by atomic nuclei, A., 861. interpretation of the relativity wave equation for two electrons,

A., 863. quantum theory of electronic scattering by helium, A., 1122.

Mott, R. A., clean coke and its value, B., 309. hardness and structure of coke, B., 666.

Mott-Smith, L. M., absence of effect of an electric field on the magnetic susceptibilities of hydrogen chloride and nitric oxide, A., 121.

Motzkus, E. See Schmitz-Dumont, O.

Mougin, P., solving the smoke problem by the use of coke, B., 914. Mouillefarine, A., dielectric substance and its manufacture, (P.), B., 252.

Moulton, D. A., refractory material used as mortar for laying-up refractories, B., 172.
Mounsey, J. W., Galbraith, W. T., and Bailey, H. C., production

of rubber substitutes, (P.), B., 864.

Mount, W. D., production of wood pulp, (P.), B., 848\*. Mount, W. D., and Warner, I., [vertical] kiln, (P.), B., 875.

Moureu, C., acraldehyde, anti-oxidants, coloured hydrocarbons yielding dissociable peroxides (rubrene family) and hæmoglobin, A., 1166.

Moureu, C., Dufraisse, C., and Badoche, M., autoxidation and antioxygenic action; catalytic properties of arsenic and its compounds, A., 36.

autoxidation and antioxygenic action. XXXIII. Catalytic properties of antimony, bismuth, and their derivatives, and of some derivatives of vanadium, A., 152.

phenylindene series. III. Derivatives of 2:3-diphenylindene, A., 318.

Moureu, C., Dufraisse, C., and Baylocq, F., phenylindene series. II. Conversion of 3:3-diphenylhydrindone into 2:3-diphenylindone, A., 318.

Moureu, C., Dufraisse, C., and Dean, P. M., phenylindene series. I. 3:3-Diphenylhydrindone, A., 318.

Moureu,  $C_{\cdot \cdot}$ , Dufraisse,  $C_{\cdot \cdot}$ , and Enderlin,  $E_{\cdot \cdot}$ , action of acids on rubrene, A., 549.

rubrene; new oxide of rubrene, A., 922.
Moureu, C., Dufraisse, C., and Gagnon, P., phenylindenes; extension of Wolff's reaction to the direct preparation of a hydrindenc from the corresponding ketone, A., 1171.
Moureu, C., Dufraisse, C., and Laplagne, P., autoxidation and

antioxygenic action; catalytic properties of silicon, boron, and their derivatives, A., 152.

Moureu, C., Dufraisse, C., and Robin, J., rubrene; mechanism of formation, an intermediate chloro-compound, A., 922.

Moureu, H., tautomerism of a diketones; two tautomeric forms of phonylbenzylglyoxal and phenylanisylglyoxal, A., 448. tautomerism of a diketones; heat of transformation of tautomerides, A., 883.

tautomerism of a-diketones, A., 929. Moureu, H. See also Lowry, T. M.

Mouriquand, G., and Leulier, A., metabolism of carbohydrates in normal conditions and in starvation, A., 347.

antirachitic action of certain cholesterolic lipins of the snail (Helix pomatia), A., 960.

Mourlaque, G. A., manufacture of paper, (P.), B., 14, 470\*. Moxham, A. J., and Electro Co., production of iron-free potash alum from solutions containing ferric sulphate, (P.), B., 1044.

Moxnes, N. H., modification of Glocker's method of quantitative analysis by means of X-ray absorption, A., 1254.

Moye, B. W. See Loyd, R. W.

Moyer, F. H., slag and gas eliminator for molten steel, (P.), B., 176. Moyer, W. W., and Adams, R., stereoisomerism of diphenyl compounds. II. Resolution of 3:3'-diaminodimesityl, A., 437.

Mozolovski, W., ammonia content of and ammonia formation in blood. X. Origin of blood-ammonia, A., 588.

Mrak, E. M., and Richert, P. H., hydrogen swelling of canned ready-to-serve prunes; effect of blanching, B., 535. effect of exhaustion on the formation of hydrogen swells in

canned ready-to-servo prunes, B., 736.

Mrozek, O., diffusion of sodium chloride in cheese, B., 225.

Mrozek, O., Schlag, H., and Eichstädt, A., effect of [feeding with] lupin-fish meal on the quality of milk and butter fat, B., 794.

Mrozovski, S., X-ray luminescence of mercury vapour, A., 625. fluorescence bands and heat of dissociation of the mercury molecule, A., 860. Muchitson, M. See Hölzl, F.

Muchlinsky, determination of free ammonia in decomposing meat.

Mudbidri, S. M., Ayyar, P. R., and Watson, H. E., oil from the seeds of Adenanthera pavonina; a source of lignoceric acid, B., 218.

Mudd, J. S., and Pebody, P. L., acidity control of chrome[-tanned] leather, B., 653.

Mudd, S., Lucke, M., McCutcheen, M., and Strumia, M., methods of studying the surfaces of living cells, with special reference to the relation between the surface properties and the phagocytosis

of bacteria, A., 1200.

Muddiman, E. W. See Davidson, W. B.

Mudford, H. D., dyeing of pure silk hose, B., 429.

Mudrovčič, M., dye sensitisers and related dyestuffs in the bleaching-out process, B., 227.

Muchlberger, C. W., constant-boiling mixture of hydrogen fluoride

and water, A., 130.

Mühlendahl, E. von, flash-points of solvents and plasticisers, B., 333.

Muchlhof, H. E. See Carl, H. H.

Mühlsteph, W., relation between bitumen content, caking power, and structure of bituminous coals, B., 703.

Müller, Adolf, and Bleier, P., reduction of cyclohexanoneisooxime (a-ketohexamethylencimine), A., 194.

Müller, Adolf, and Rölz, E. [with Gerö, A.], preparation of aε-dihydroxy-n-pentano (pentamethylene glycoi) and aε-diiodo-n-pentane, A., 46.

Müller, Adolf, and Wachs, H., synthesis of 2-ethylpyrrolidine;

A., 1461.

Müller, Alex., hydrocarbon model, A., 750.

connexion between the zig-zag structure of the hydrocarbon chain and the alternations in the properties of odd- and evennumbered chain compounds, A., 869.

spinning target X-ray generator, A., 1035.

spinning target X-ray generator and its input limit, A., 1367. Müller, Alexander. See Zemplén, G.

Müller, Arno. Sec Kjelsberg, F.
Müller, Carl (Berlin), manufacture of thin bodies made of alloys of metals or metalloids, (P.), B., 726.

Müller, Carl, and Mey, K., manufacture of thin metallic foil, (P.), B., 526.

Müller, Carl (Mannheim). See I. G. Farbenind. A.-G.

Müller, C. E. See Grasselli Dyestuff Corporation.
Müller, C. H. F., [gas-filling for] electron tubes, more especially for incandescence cathode Röntgen tubes, (P.), B., 527. Müller, D., dextrose-oxidase. II., A., 470.

behaviour of dextrose-oxidase towards dialysis, hydrocyanic acid, carbon monoxide, and methylene-blue, A., 1489.

Müller, Erich (Dresden), theory of valency of boron, and the constitution of the simplest boron hydride, A., 13.

use of electrometric analysis in the preparation of bleach liquors, B., 52.

Müller, Erich, and Bennewitz, R., potentiometric determination of gold and platinum with stannous chloride, A., 532.

Müller, Erich, and Ekwall, P., theory of electrodeposition of chromium from aqueous solutions of chromic acid, A., 275.

Müller, Erich, and Hentschel, H., simultaneous determination of silver and cadmium by potentiometric titration, A., 42.

Müller, Erich, and Kogert, H., simplified potentiometric analysis,

Müller, Erich and Loerpabel, W., catalytic decomposition of aqueous solutions of formic acid by platinum metals. IV., A., 1401.

Müller, Erich, Markert, H., and Heinrich, F., removal of carbon dioxide from the atmosphere by electrolytic transport, B., 205. Müller, Erich, and Schwabe, K., sorption of hydrogen by the

platinum metals, A., 639. Müller, Erich, and Stscherbakov, J., theory of the electrodeposition of chromium from aqueous chromic acid solutions. III., A., 775.

Müller, Ernst (Heidelberg), and Henecka, H., action of carbonic acid under high pressures on iron, B., 751.

Müller, Ernst (Marburg), quantitative extraction of cholesterol and its esters from tissues and body fluids, A., 110.

Müller, Ernst (Marburg). See also Sievers, H. Müller, Ernst F. See Petersen, W. F.

Müller, Fr. See Roth, W. A.

Müller, Friedrich, anodic behaviour of palladium in chloride solutions, A., 33.

Müller, Fritz. See Burckhardt, E., Grasselli Dyestuff Corp., Hoffa, E., and Rothlin, E.

Müller, Georg. See Neumann, B. Müller, Gerhard. See König, Alfred.

Müller, H. See Felix, K.

Müller, Hans (Berlin). See Schroeter, Georg. Müller, Hans (Camb., Mass.). See Kitchin, D. W.

Müller, Helmut, determination of the oxidation quotient of urine, A., 1480.

Müller, Hermann, and Geigy Société Anonyme, J. R., dyeing and printing, (P.), B., 640\*.

Müller, Hugo, bearing metals with a lead-antimony-tin basis, B., 943.

Müller, Hugo. See also Seiser, A., and Wacker Ges. f. electrochem. Ind. G.m.b.H., A.

Müller, Jens. See Grasselli Dyestuff Corporation. Müller, Joachim. See Grasselli Dyestuff Corporation.

Müller, Johannes, distribution of mercury in the organism and its elimination after injection of "salyrgan," A., 720.

Müller, Julius. See I. G. Farbenind. A.-G.

Müller, J. A., euphorbons from euphorbium resin, A., 568. paleuphorbons from resin of Euphorbia palustris, L., A., 1306. Müller, J. H., and Gulezin, C. E., germanate gels of the alkaline earths, A., 1003.

Müller, Karl, and Sander, W., bearing-metal alloys, (P.), B., 60, 985\*.

Müller, O. F., and Nyanza Color & Chemical Co., Inc., delustring of artificial silk fibres, (P.), B., 640.

Müller, P. See Goy, S. Müller, R.

Sec Rütgerswerke-A.-G. Müller, Robert, electromotive behaviour of aluminium and its amalgams, A., 769.

theory of passivity, A., 1016.

increasing the sp. gr. of molten electrolytes [for refining aluminium], (P.), B., 562.

Müller, Robert [with Kreiner, F., and Schmidt, H. J.], electromotive properties of rare-earth metals and their amalgams. Lanthanum, A., 1391.

Müller, Robert, and Schmidt, H. J., electromotive properties of rare-earth metals and their amalgams. II. Cerium, A., 1391.

Müller, Rudolf. See Grasselli Dyestuff Corporation. Müller, Ralph H. See Niederl, J. B., and West, W.

Müller, R. M., fluorescence and photo-sensitisation in aqueous solution. III., A., 8. üller, W. See Borsche, W.

Müller, W.

Müller, Walther. See Geiger, H. Müller, Werner. See Grasselli Dyestuff Corp. and Reddellen, G. Mueller, Wilhelm (Gleiwitz), regenerative coke ovens, (P.), B., 464.

Müller, Wilhelm (Ludwigshafen). See Grasselli Dyestuff Corporation.

Müller, W. J., passivity of metals, A., 146.

experimental foundations of the passivity theory, A., 270.

periodic phenomena at the anode, A., 270. theory of passivity. V. Influence of coating layer on tho potential of a metal, A., 886.

kinetics of passivity phenomena, A., 1393.

Müller, W.J., and Konopicky, K., theory of passivity. III. Current density-time curves in cases of coating passivity, A., 146.

current density-potential curves in the region of residual currents of various metals, A., 269.

anodic behaviour of aluminium, A., 770. theory of passivity. VI. Passivation of chromium at low current densities, A., 1241.

Müller, W. J., and Löwy, O., theory of passivity. IV. Dependence of specific passivating time for iron on the concentration and nature of electrolytes, A., 402.

Müller, W. J. See also I. G. Farbenind. A.-G. Müller-Cunradi, M. See I. G. Farbenind. A.-G.

Müller Röntgen-Rohrenfabr., C. H. F. Seo Engels, R.

Müllner, O., influence of formaldehyde on dilute malt extracts, A., 847.

Münch. C., method and apparatus for coating paper, fabrics, etc., (P.), B., 1012. Mnench, O. B. See Germann, F. E. E.

Münder, E. Seo Rother, F.

Münster, W. See Wieland, H.

Münter, F., nitrogen manuring, B., 143.

Münz, F., use of dispersing agents for washing textiles with hard water, B., 712.

Mugdan, M., Wimmer, J., and Consortium für Elektrochemische Industrie, production of butyric aldehyde, (P.), B., 973\*. Mugge, H. See Schlossmann, H.

Muir,  $J_{\cdot \cdot}$ , tensile tests on rods and wires of the same iron, B., 476.

Muir, J. See also Wilkinson, G. H.
Muirhead, W. A. See Clayton Installations, Ltd.
Mujica, J. L., electroplating apparatus, (P.), B., 564.

Mukai, S., activation of Ricinus lipase by acids, A., 353.

Mukerji, B. K., Bhattacharya, A. K., and Dhar, N. R., variation of extinction coefficient with temperature, A., 120.

Mukerji, B. K., and Dhar, N. R., kinetics and temperature coefficients of some photochemical reactions in radiations of different wave-lengths, A., 893.

Mukherjee, B. C., and Chatterji, A. K., high-frequency discharge in

gases, A., 482.

Mukherjee, B. C., and Ray, B. B., critical determination of the

Mukherjee, B. C., and Ray, B. B., critical determination of the K-,  $L_1$ -, and  $M_1$ -lovels for the lighter elements, A., 1208. Mukherjee, B. C. See also Ghosh, P. N. Mukherjee, J. See Ghosh, J. C. Mukherjee, J. N., moving boundary method applied to the measurement of the absolute velocity and the transport number of ions and of the rate of migration of colloidal particles, A., 143.

Mukherjee, J. N., and Ral-Chandhury, S. P., critical potential in the coagulation of colloids by electrolytes, A., 136.

Mukherjee, J.N., Rai-Chaudhury, S.P., and Bhattacharyya, A.S., variation of electrical charge of colloidal particles. IV. Effect of dilution on charge of colloidal particles in presence and absence of electrolytes, A., 261.

Mukherjee, J. N., Rai-Chaudhury, S. P., and Rao, A. N., variations of electrical charge of colloidal particles. III. The influence of non-electrolytes on the cataphoretic speed of colloidal particles and the adsorption of ions by colloidal particles as indicated by such measurements, A., 261.

Mukherjee, S. K., and Sengupta, P. N., Raman spectra of sulphurio acid and the sulphates, A., 976.

Mukherjee, S. K. See also Bose, S. N.

Mukherji, A. Sce Sen, R. N. Mukherji, S. Sce Neogi, P.

Mulder, F. P., energy levels of the elements chromium to lanthanum in the X-ray region, A., 125. Mulder, J. G. W. See Dobben, P. W.

Mulford, H. K., and Greenbaum, F. R., apparatus for hydrogenion determinations, A., 1034.

Mulinos, M.G., ethylisoamylbarbiturio acid (amytal) as anæsthetic

for cats, A., 348.

Mullen, E. J., and General Chemical Co., burning of sulphur, (P.), B., 814.

Mullenheim, S. von. Seo Klemm, W.

Muller, G. L., serum-cholesterol, lecithin-phosphorus, and fatty acids of pigeons after feeding with ox tissues, A., 1484.

Muller, G. L., and Scorpio, E., experimental bone-marrow reactions. VI. Adequacy of kidney, pancreas, spleen, and brain, for blood regeneration in pigeons with nutritional anæmia, A., 594.

Muller, J. F., influence of organic matter and lime on soil moisture and on the percentage of carbon and nitrogen in field soils, B., 297.

Muller, K. W. See Wiegner, G. Mulliken, R. S., [heat of dissociation of nitrogen], A., 8.

assignment of quantum numbers for electrons in molecules. II. Correlation of molecular and atomic electron states, A., 116.

interpretation of the atmospheric absorption bands of oxygen, A., 235.

electronic states and band spectrum structure in diatomic molecules. VII.  ${}^2P{\longrightarrow}{}^2S$  and  ${}^2S{\longrightarrow}{}^2P$  transitions, A.,

electronic states and band spectrum structure in diatomic VIII. Some empirical relations in σ-typo molecules. doubling, A., 623.

assignment of quantum numbers for electrons in molecules.

III. Diatomic hydrides, A., 740.

band spectra and atomic nuclei, A., 1349.

structure of OH bands, A., 1364. Mulliken, R. S. See also Monk, G. S.

Mullin, J., apparatus for pulverising coal or other fuel, (P.), B., 746. Mullins, G. M. See Coleman, G. H. Mulsow, F. W., agglutination and colloidal reactions, A., 340. Mumford, L. S. See Lunt, R. W.

Mumford, S. A., and Phillips, J. W. C., evaluation and interpre-

tation of parachors, A., 1219. Mumford, S.A. See also Phillips, J.W.C.

Munch, E. Sec Grasselli Dyestuff Corporation.

Munch, J. C., toxicity of thallium sulphate, A., 98.

Munch, J. C., and dittinger, G. S., bio-assay of aconite and its preparations. I. Lethal dose of aconitine to rats, A., 350. Munch, J. C. See also Hartung, W. H., and McClosky, W. T.

Mundatechnical Products Co. See Jackson, L. E. Mundinger, E., evaluation of rennin, B., 225.

action of rennin, B., 225.

spontaneous decomposition of butter fat, B., 784. optical detection of watering of milk, B., 795.

Munds, E. See Heiduschka, A.

Munilla, A. See Fuentes, B. V., and Haendel, M.

Munk, F., relation between colouring power and covering power

of whito pigments, B., 690.

Munn, W. F., combination electrochemical switchboard, A., 1416.

Munsen, J. J., centrifugal machine, (P.), B., 459.

Munster, C. See Szivessy, G. Munters, C. G. See Electrolux, Ltd.

 Munzert, H., process of stand-oil formation, B., 689.
 Murakami, K., significance of bile acids in carbohydrate metabolism.
 IV. Antagonistic effect of bile acids against adrenaline, A., 597.

Murakami, S., coating and welding of glass, B., 979.

Murakami, T., stepped lowering of the A1 transformation in steels, B., 436, 478\*.

Murakami, T., and Shinagawa, T., equilibrium diagram of the cadmium-antimony system, A., 766.

Murakami, T. See also Ogawa, Y., and Takei, T.

Muramatsu, S., special constituents of the soya bean, A., 961. Muraour, H., laws of combustion of colloidal powders; influence

of the temperature of the gas surrounding the powder particles on velocity of combustion, B., 265.

Murata, K., electrode potential of nickel. II. Effect of occluded hydrogen on the electrode potential of nickel, A., 33, 653. electrode potential of nickel. III. Mechanism of the re-

activation of the passive state of nickel, A., 144, 653. Murayasu, T., influence of glycine on the electrical conductivity of

salt solutions, A., 770.

Murch, W. M., and National Aniline & Chemical Co., production of

anthraquinone colouring matters, (P.), B., 550.

Murdoch, G., absorption of phosphorus in normal and rachitic children, A., 954.

Murdoch, R. Seo Prentice, T. K.

Murmann, E., detection of bromide and iodide, A., 413. Murmann, H., transmissibility of thin metal foils for long-wave infra-red radiation, and their electrical conductivity, A., 753. Murneer, A. E., nitrogen and carbohydrate distribution in organs

of bearing apple spurs, A., 1112.

Murnseer, E. See Hempel, H.

Murooka, H. See Ishikawa, F

Murphy, A. F., Jones, W., and American Rolling Mill Co., treatment of silicon steel, (P.), B., 603.

Murphy, D.W. See Carr, A.R.Murphy, E.A. See Dunlop Rubber Co., Ltd. Murphy, E.J., electrical conduction in textiles. II. Alternating current conduction in cotton and silk, B., 318.

electrical conduction in textiles. III. Anomalous properties, B., 468.

Murphy, E.J., and Walker, A. C., electrical conduction in textiles. I. Dependence of the resistivity of cotton, silk, and wool on relative humidity and moisture content, B., 201.

Murphy, H. F., effects of crude petroleum on nitrate production,

seed germination, and growth, B., 532.

Murphy, H. F. See also Harper, H. J. Murphy, L. C., and Jenkins, R. C., apparatus for the distillation of urea-nitrogen, A., 166.

Murphy, R. M., warpage study of terra-cotta clays, B., 19.

Murphy, W. P. See Blotner, H.

Murray, A. G., solubility of sodium and potassium hydroxides in methyl and ethyl alcohols, A., 1139.

Murray, A. G. See also Kipping, F. S. Murray, D. R. P., molecular constitution and accessibility to enzymes; effect of various substances on the velocity of hydrolyses by pancreatic lipase, A., 723.

Murray, H. D., ionic equilibrium in colloidal solutions, A., 261. Murray, H. D., and Norton & Gregory, Ltd., production of photographic images, (P.), B., 872.

Murray, H. D. See also Becker, W. T. L. Murray, T. F., jun. See Gray, H. Le B.

Murray, W. F., determination of molybdenum in steel, B.,

Murray, W. J., compression of refinery and casinghead gases, B., 1004.

Murray, W. S. See Gray, D.

Musag Gesellschaft für den Bau von Müll- & Schlacken-Verwertungsanlagen, Akt.-Ges., and Grote, A., manufacture of constructional materials, (P.), B., 980.

Musajo, L., Doebner reaction. VIII. 3-Phenyl-β-anthraquinonequinoline-1-carboxylic acid, A., 578.

Musajo, L. See also Ciusa, R.

Musher, S., olive oil analytical method; use of ultra-violet ray in detection of refined in "virgin" olive oil, B., 137.

Musher, S., and Willoughby, C. E., olive oil analytical method. II. Use of ultra-violet ray in detection of refined in "virgin' olive oil, B., 784.

Musil, A., thermodynamic relations in the hydrolysis of esters by alkali hydroxide and sodium carbonate, A., 1017.

hydrolysis of methyl acetate with alkali carbonates, A., 1396. Muskat, E., and Huggins, K. A., conjugated systems. I. Chlorin-

ation of phenylbutadiene. 1, A., 1170.

Muskat, E., and Ludeman, H., isolation of the intermediate Grignard additive compound, CHPh:CH-CHMe-OMgBr. I., A., 1298

Muskat, I. E. See Rising, M. M. Muskat, M. See Epstein, P. S.

Musker, A., combustion of fuels and the application and use of the heat produced thereby, (P.), B., 195.

Mussgnug, F. See Gossner, B., and Vanino, L.

Mutaftschiev, Z. C. See Stranski, I. N

Muth, and Voigt, stimulation of mustard seeds with carbon disulphide, B., 616.

phosphoric acid and iron contents of Rheingau musts and wines, B., 618.

Muth, A. See Heiduschka, A.

Muth, F. See Heiduschka, A., and Schmelzer, A.

., changes in blood constituents during avitaminosis, A., 1111.

Muto, T., Hida, S., and Kanegafuchi Boseki Kabushiki Kwaisha, manufacture of colloidal solutions of natural silk, (P.),

liquidation of natural silk threads, (P.), B., 554\*.

obtaining artificial threads of natural silk from colloidal solutions of natural silk, (P.), B., 593.

Muto, T., and Yamaguti, T., diffraction of cathode rays by powdered crystals, A., 746.

Mutter, E., photolysis of silver bromide, A., 277.

Myers, H. A., and Metal Castings Holding Co., treatment of moulds for producing soft eastings, (P.), B., 522.

Myers, H. B., and Ferguson, C., effect of salicylate administration on the acetone substance content of the blood, A., 600.

Myers, R. P., germicidal properties of alkaline washing solutions, with special reference to the influence of hydroxyl-ion concentration, buffer index, and osmotic pressure, B., 578.

Mygind, H. G. See Troensegaard, N.

Mylius, W. See Ekwall, P

Myrbäek, K., extraction and purification of co-zymase from yeast, A...472.

Myrbäck, K., and Euler, H. von, dried yeast, A., 1199. Myrbäck, K. See also Bartel, C., and Euler, H. von. Myrbäck, S. See Euler, H. von.

Myschalov, C. See Riesz, E.

## N.

Naamlooze Vennootschap Algemeene Norit Maatschappij. See Algemeene Norit Maatschappij.

Naamlooze Vennootschap Bataafsche Petroleum Maatschappij. See Bataafsche Petroleum Maatschappij.

Naamlooze Vennootschap J.A. Carp's Garen-Fabrioken, composition for imparting to mercerising lye the property of easily wetting cotton fabrics and yarns, (P.), B., 716.

Naamlooze Vennootschap Glasfabriek "Leerdam" voorheen Jeekel, Mijnssen & Co. See Cochius, P. M.

Naamlooze Vennootschap Huygen & Wessel's Ingenieursbureau, apparatus for sterilising liquids, (P.), B., 3.

Naamlooze Vennootschap Internationaal Octrooibureau, Meyer, F., Spanner, H. J., and Germer, E., electric luminous tubes; devices for production of ultra-violet radiation, (P.), B., 401.

Naamlooze Vennootschap "Kodowa" Refrigerator Co., refrigerating apparatus, (P.), B., 193.

absorption refrigerating apparatus, (P.), B., 501, 545. Naamlooze Vennootschap "Kodowa" Refrigerator Co., and Slager, W. A., refrigerating apparatus of the absorption type, (P.), B., 381, 420, 501.

Naamlooze Vennootschap Neckar Waterreiniger Maatschappij, and Noordendorp, H., distillation of water for feed water make-

up, (P.), B., 190.

Naamlooze Vennootschap Nederlandsche Kunstzijdefabriek, preparation of artificial textile products with reduced lustre from acetylcellulose, (P.), B., 126.

spinning cans or boxes for artificial silk, (P.), B., 750. Naamlooze

Vennootschap Nederlandsche Kunstzijdefabriek. See also Hensing, J. C. Naamlooze Vennootschap Nederlandsche Mijnbouw en Handel

Maatschappij. See Wiederhold, II. Naamlooze Vennootschap Nederlandsche Parasinfabriek, artificial

sausage casings, (P.), B., 698. Naamlooze Vennootschap Noritvereeniging Verkoop Centrale,

recovery of gases or vapours taken up by absorbents, (P.), B., 632

Naamlooze Vennootschap Noritvereeniging Verkoop Centrale, and Algemeene Norit Maatschappii, recovery of gases or vapours taken up by adsorbents, (P.), B., 581.

Naamlooze Vennootschap Noury & van der Lande's Handel-maatschappij, and Lande, J. A. L. van der, manufacture of a flour improver, (P.), B., 71.

manufacture of a flour improver and products treated therewith, (P.), B., 147.

Naamlooze Vennootschap Organon tot bereiding van orgaanpreparaten op wetenschappelijken grondslag, separation of active ovarian hormones, (P.), B., 661.

Naamlooze Vennootschap Philips' Gloeilampenfabrieken, gasfilled incandescence cathode discharge tube, (P.), B., 25 manufacture of bodies [e.g., wire] from metals [e.g., tungsten]

having a high m. p., (P.), B., 176. coating metallic or non-metallic bodies with rhodium, iridium, and ruthenium, (P.), B., 251

coating metallic or non-metallic bodies with osmium, (P.),

electric discharge tubes, (P.), B., 253, 401, 528, 1021. manufacture of glass, (P.), B., 356.

X-ray tubes [with metallic envelope], (P.), B., 363. sealing or jointing of glass and quartz, (P.), B., 394. marking of incandescence lamps, etc., (P.), B., 527.

[gas-filled] electric discharge tubes [containing mercury], (P.), B., 650.

Naamlooze Vennootschap Philips' Gloeilampenfabrieken, X-ray apparatus for crystallographic examination, etc., (P.), B., 689. [gas-filled] electric discharge tube [for rectifying multiphase alternating current], (P.), B., 726.

Naamlooze Vennootschap Philips' Gloeilampenfabrieken. See also Arkel, A. E. van, Bouwers, A., De Boer, J. II., Dobben, P. W.,

Hertz, G. L., Holst, G., and Romp, J.

Naamlooze Vennootschap Soc. Chem. Ind. "Katwijk," extraction of theobromine from natural products, (P.), B., 149.
Naamlooze Vennootschap Soc. Chem. Ind. "Katwijk."

Dorp, G. C. A. van.
Naamlooze Vennootschap Vereenigde Nederlandsche Rubberfabrieken, recovering cotton or other fibres, fibre stuff, or fibre pulp from rubber-fabric, (P.), B., 692.

Nabenhaner, F. P. See Anderson, R. J.

Nachmansohn, D., decomposition of creatinephosphoric acid in relation to the activity of muscle. II., A., 843.

decomposition of creatinephosphoric acid in relation to the activity of muscle. III. Extent of decomposition and rate of stimulation, A., 1484.

Nachmansohn, D. See also Weber, H. H.

Nachod, H. See Gen. Electric Co.

Nadler, J. E. See Zeckwer, I. T.

Nadson, G., and Roehline-Gleichgerwicht, E., formation of calcium oxalate crystals in vegetable cells in ultra-violet light, A., 108.

conversion of starch granules into calcium oxalate crystals in plant cells by ultra-violet light, A., 477.

Naef & Cie, M. See Soc. Anon. M. Naef & Cie. Naef & Co., M. See Ruzicka, L.

 Naegeli, C., modified Curtius reaction. II., A., 437.
 Naegeli, C., Grüntuch, L., and Lendorff, P., modified Curtius reaction. III. Degradation of saturated fatty acids and benzoic acid, A., 540.

Naegeli, C., and Lendorff, P., modified Curtius reaction. IV. Degradation of perhydronorbixin, A., 1456.

Naert, A., apparatus for extracting gas and oil from waste, (P.),

Naeser, G., pyrometer for measuring temperatures by means of a colour charge, B., 381.

Naewiger, W. See Mimosa A.-G.

Nagahama, T. See Grather, G.

Nagai, S., early strength of cement. I., B., 96. action of acids on cement and mortar, B., 777. Japanese cement. V.-VIII., B., 980.

action of acid on cement mortar, B., 980.

Nagai, T. See Goto, M. Nagai, W. M., and Kanao, S., synthesis of isomeric ephedrines

and their homologues, A., 807.

Nagai, Y., effect of anti-knock materials on the speed of initial uniform movement of the flame in hydrocarbon-air mixtures, A., 147.

Nagai, Y. See also Tanaka, Y.

Nagao, S. See Mazume, T.

Nagaoka, H., Ikebe, J., and Zaidan Hojin Rikagaku Kenkyujo, electromagnetic chemical balance, (P.), B., 689.

Nagaoka, H., and Mishima, T., isotope effect in the spectrum of

Nagaoka, H., and Sugiura, Y., cadmium lamp, A., 903.
Nagasako, N., enantiotropy and monotropy. II., A., 20.
Nagayama, T., Machida, H., and Takeda, Y., experimental scurvy II. Carbohydrate metabolism of the animal fed on a vitamin-C diet, A., 1111.

Nagayama, T., and Sato, N., experimental scurvy. III. Nitrogen metabolism, A., 1111.

Nagel, T., oven for drying or baking briquettes and other moulded products, (P.), B., 458.

Nagel, W., abietic anhydride, B., 219.
Nagy, J., atomic spacing in gypsum crystals, A., 381.
Nagy, V. L. See Bodnar, J.

Nahikian, K. M., Foster, R. W., Belden, E. T., and Brewer & Co., Inc., calcination of lime, (P.), B., 643.

Nahme, H. See Weinhaus, H. Nahmias, M., evaluation of the  $\alpha$ -radiation of the active deposit of actinium by measurement of its  $\beta$ -radiation, A., 621, 971.

Naik, K. G., and Amin, M. B., interaction of chlorosulphonic acid with substituted cyanoacetamides, A., 57.

Naik, K. G., Desai, R. D., and Desai, H. R., coumarin condensations. I. Condensation of ethyl allylacetoacetate with phenols,

A., 574.

Naismith, D. M. See Naismith, G.

Naismith,  $G_{\cdot}$ , and Naismith,  $D_{\cdot}$ ,  $M_{\cdot}$ , furnaces, (P.), B., 999.

Naito, D. See Marusawa, T.

Naito, Y., micro-determination of phosphorus in tissue, A., 730. Nakahara, W., and Somekawa, E., non-consumption of vitamin-Bby growing chicken sarcoma, A., 718.

Nakahara, Z. See Suminokura, K. Nakajima, M. See Kondo, K.

Nakamiya, Z., oxidation of "biosterin" [biosterol] by ozone, A., 190.

Nakamura, G., spectral absorption of lithium hydride and the molecular constants of LiH, A., 615.

Nakamura, S. See Yoshimoto, S.

Nakamura, T. See Goto, K.

Nakamura, Y., brewing barley, B., 656.

Nakamura, Y. See also Kita, G.

Nakanishi, H. See Grasser, G.

Nakano, M., beating. III. Direct measurement of the water of imbition of [paper] stuff, B., 91.

structure of vegetable fibres. I. Spiral structure of cotton, wood, manila, straw, bamboo, and sugar-cane (bagasse) fibres, B., 937.

Nakashima, M., metabolism of the retina of the fish at different temperatures, A., 466.

Nakashima, M. See also Weigert, F.
Nakashima, S. See Kubota, S.
Nakashima, T., cellulose xanthamides, A., 300, 430, 799\*.

cellulosexanthoacetic acid, A., 430, 799\*.

cellulose benzyl ethers, A., 684. viscosity of viscose, B., 773. viscose. XXVI. Swelling of cellulose in sodium hydroxide solutions, B., 917

Nakashima, T., and Sakurada, I., selective action of three hydroxyl groups of cellulose, A., 684.

Nakashima, T. See also Kita, G. Nakata, H. See Matsumiya, K. Nakau, U. See Watanabe, M. Nakawaga, K. See Endo, H.

Nakaya, U., emission of soft X-rays by different elements, with reference to the effect of adsorbed gas, A., 985.

Nakaya, U., and Fujioka, Y., spectrographic investigation of spark discharge, A., 111.

Nakaya, U. See also Terada, T.

Nakayama, T., influence of various elements on the nitrogenation of steel, B., 647.

Nakhmanovich, M. I., advantageous zone of  $p_{\rm H}$  for [beet-sugar] refinery liquors, B., 1027.

Nakhmanovich, M. I., and Zelikman, J. F., quality and quantity of [sugar liquor] wash-water from bone-black filters, B., 655. speed of crystallisation of sucrose from beet products, B., 790. influence of temperature of refinery masseculte on hardness and destruction of sugar, B., 952

Nametkin, S. S., crude oil in Kamchatka, B., 85.

Nametkin, S. S., and Alexandrov, Z., camphenilane series. II. apoCyclene, camphenilene, and some of their derivatives, A., 191.

Nametkin, S. S., and Glagolev, E., octahydronaphthalene from tertiary decahydronaphthol, A., 921.

Nametkin, S. S., and Nekrassov, V. V., reactions of primary marshes, A., 949.

Nametkin, S. S., and Robinson, E. A., determination of unsatur-

ated and aromatic hydrocarbons in gasoline, B., 931. Nance, C. W., [autoclave] treatment of hides in production of leather, (P.), B., 653.

Nance, F. D. See Adolph, E. F.

Nanji, D. R. See Abbey Synd., Ltd.

Naoum, P., and Meyer, K. F., vapour pressure of nitroglycerin and nitroglycol, B., 379, 539.

Napoleoni, L. See Viale, G.

Napoli, M. See Colella, C.

Narain, R. See Lander, P. E. Narasimhaswami, M. V. See Rao, E. L.

Narayama, N., and Sreenivasaya, M., characterisations of small

quantities of proteins by Van Slyke's method, A., 712.

Narayan, A. L. See Rao, A. S.

Narayanamurti, D., and Ayyar, C. V. R., enzyme action. IV.

Tyrosinase. I., A., 1489. Narayanamurti, D., Ayyar, C. V. R., and Norris, R. V., enzyme action. III. Amylase from cumbu (Pennisetum typhoideum), A., 1488.

Narayanamurti, D., and Norris, R. V., enzyme action. II. The nature of amylase, A., 216.

Narita, amaryllis, A., 106.

Narkevioh, M. M. See Efremov, N. N.

Narkiewicz-Jodko, K., excitation of radiation by metals by after-glowing mercury vapour, A., 1353.

Naryschkin, N. A. See Godnev, T. N.

Nasakin, S. P., extraction of acetic acid from its dilute solutions,

Nash, A. W., and Howes, D. A., knock ratings of pure hydrocarbons, B., 272, 346.

[anti-knock ratings of pure hydrocarbons], B., 422.

Nash, A. W. See also Stanley, H. M.

Nash, C. A., and Cutler-Hammer Manufacturing Co., production of plastic composition materials, (P.), B., 566.

Nash, T. P., jun., phloridzin diabetes. III. Effect of phloridzin on glycogen storage in dogs with ligated ureters, A., 1100.

on glycogen storage in dogs near agents. S. R. Nash, T. P., jun. See also Benedict, S. R. Nasini, A. G., molecular dimensions of organic compounds. II. Nasini, A. G., molecular dimensions and cyclohexane. III. Viscosity of vapours: benzene, toluene, and cyclohexane. III. Viscosity of vapours: thiophen and 2-methylthiophen, pyridine, and thiazolc, A., 637.

Nasini, A. G., and De Cori, P., analysis of fatty substances in Wood's light, B., 291.

Nasini, A. G., and Rossi, C., viscosity of gaseous mixtures,

viscosity of mixtures of rare gases. I., A., 254.

Nasini, A. G. See also Lowry, T. M., and Mazza, L.

Nasledov, D., and Scharavski, P., ionisation of solid dielectrics by X-rays; investigations on ceresin, A., 1356.

Nasset, E. S., and Greenberg, D. M., rate of hydrolysis of casein in acid solution from formation of amino-nitrogen, A., 517. Nasset, E. S. See also Haley, D. E.

Nathan, E., and Stern, F., mineral content of the skin. I. Microdetermination of potassium and calcium, A., 1479.

Nathan, (Sir) F. L., explosions in coal mines and permitted explosives: historical record, (P.), B., 581.
Nathanson, J. B., variation with state of the optical properties

of potassium and casium, A., 116.

National Academy of Science, Washington. See Cleveland, L. R. National Acme Co., Faterson, D. S., and Petsche, G. B., centrifugal

clarifying separator, (P.), B., 79. centrifuge, (P.), B., 498. National Air Filter Co. See Birkholz, H. E.

National Aluminate Corporation. See Christman, C. H.

National Aniline & Chemical Co., Inc. See Dieterle, P., Geller, L. W., Hillyer, H. W., Kranz, F. H., Kyrides, L. P., Lewis, H. F., Murch, W. M., Nelson, R. A., and Ogilvie, J.

National Canners Association. See Bohart, G. S. National Carbon Co., Inc., [depolarising bobbin for] dry cells, (P.), B., 481.

National Carbon Co., Inc. See also Bagley, G. D., Benner, R. C., and Walden, D. O.

National Coal Distillation Corporation. See Rohmer, G. E.

National Fire Proofing Co., and Shipley, R. A., manufacture of [hollow] tiles, (P.), B., 646.

National Gypsum Co. See Haggerty, J. F.

National Lime Association. See Underwood, J. E.

National Malleable & Steel Castings Co., and Schwartz, H. A., manufacture of malleable-iron castings, (P.), B., 649\*

National Metal & Chem. Bank, Ltd. See Stephens, F. G. C. National Processes, Ltd., and Robson, S., roasting of pyritic ores,

(P.), B., 399. National Processes, Ltd., and Storer, G. E., sintering machines;

apparatus for roasting or sintering of ores, etc., (P.), B., 329.
National Processes, Ltd. See also Lambert, B., and Robson, S.

National Refining Co. See Fretter, F. B.

National Refrigerating Co. See Keyes, F. G.

Natta, G., constitution of hydroxides and hydrates. II. Complexes containing water of co-ordination, A., 15.

constitution of hydroxides and hydrates. III. Strontium hydroxido octahydrate, A., 244.

Natta, G., and Passerini, L., solid solutions, isomorphism, and symmorphism among the oxides of bivalent metals. I. The systems CaO-CdO, CaO-MnO, CaO-CoO, CaO-NiO, and CaO-MgO, A., 639.

spinels of the type M<sub>2</sub>IIMIVO<sub>4</sub>, A., 780. spinels of bivalent cobalt; cobaltous aluminato, chromite, ferrite, and cobaltite, A., 870.

Natta, G. See also Bruni, G.

Natural Color Pictures Co. See Fox, W. F.

Naudé, S. M., quadruplet structure of the first spark spectrum of mercury, Hg II, A., 1352.

Naugatuck Chemical Co., treatment of rubber latex, (P.), B., 104.

Naugatuck Chemical Co., and Cadwell, S. M., vulcanisation of rubber; production of accelerators for vulcanising rubber, (P.), B., 295.

vulcanisation of rubber, (P.), B., 485.

Naugatuck Chemical Co., and Hazell, E., manufacture of rubber articles, (P.), B., 485.

Naugatuck Chemical Co., Johnston, W. S., and Keen, A. W., treating solutions [for recovering gummy or plastic substances], (P.), B., 65\*.
Naugatuck Chemical Co., and McGavack, J., treatment of [rubber]

latex, (P.), B., 864.

Naugatuck Chemical Co., McGavack, J., and Shive, R. A., preservation of rubber latex, (P.), B., 692\*.

Naugatuck Chemical Co. See also Adams, H. S., Bradley, C. E., Cadwell, S. M., McGavack, J., Maximov, A. J., Ostromislensky, I., Smith, O. H., and Teagne, M. C.

Naugle, H. M., Townsend, A. J., and Columbia Steel Co., continuous [steel] annealing and cleaning process, (P.), B., 360. continuous annealing process, (P.), B., 754.

Naugle, J. J., electric furnace product [active carbon], (P.), B.,

treatment of carbonaceous materials in electric furnaces or the like, (P.), B., 971\*. gle, J. J. See also Wickenden, L.

Naugle, J.J.

Naujoks, E. See Diels, O. Naumann, E., determination of drop points by Ubbelohde's method, B., 346.

Naumann, H., micro-polarimeter tubes with matt inner surface, A., 1262.

Naunton, W.J.S., colouring of rubber, B., 256.

Naunton, W. J. S. See also Imperial Chem. Industries, Ltd.

Nave, G. M. See Braunholtz, W. T. K.

Navez, A. E., respiration and geotropism in Vicia faba. I.,

Navez, A. E., and Rubenstein, B. B., effect of polarised light on starch hydrolysis, A., 216.

Navias, L., scratch-hardness tests of ceramic materials, B., 246. rate of drying of a plastic porcelain mass due to reduced pres-

sure and heat, B., 518. Navrotzky, N., recovery of alcohol [from the vapours from bake-

house ovens, etc.], (P.), B., 35. Nawiasky, P., Krauch, E., and Gen. Aniline Works, Inc., [manu-

facture of j vat dyes, (P.), B., 974\*.

Nawiasky, P. See also I. G. Farbenind, A.-G.

Naylor, L. W., and Continental Oil Co., revivification of [earthy] filtering material [used for filtering mineral oils], (P.), B., 197.

dewaxing of oils, (P.), B., 804. Nazarov, P. See Pavlenko, M.

Nazarov, S. A., working-up turbine oil distillate for white oil, B., 117.

Nead, J. H. See Reinartz, L. F.

Neal, A. M. See Kraus, C. A. Neale, A. E. T. See Dunlop Rubber Co., Ltd.

Neale, A. V., and Esslemont, M. S., ohloride, sugar, and calcium content of the cerebrospinal fluid in children, A., 717.

Neale, J., instrument for measurement of minute degrees of luminosity, (P.), B., 689.

illumination of light-sensitive cells, (P.), B., 727. construction of selenium bridge or cell, (P.), B., 824.

selenium cell, (P.), B., 902\*.

Neath, J. See Gas Light & Coke Co. Neave, S. L., and Buswell, A. M., alkaline digestion of sewage

grease, B., 113.

Nebbeliug, P., Walden inversion, A., 1273.

Neber, P. W., and Uber, A., new rearrangement of oximes. II., A., 188.

Nečásova, V. Sco Bělehrádek, J. Necheles, H. See Lim, R. K. S.

Necke, A. See Seiser, A.
Nedšikova, M. See Bureš, E.
Nedsvedsky, S. V., relation between potassium and dialysable and undialysable calcium in the intermediate region, A., 214.

Nedsvedsky, S. V., and Alexandry, A. K., relation of various organs to cholesterol, fat, and lecithins, A., 466.

Needham, C. E., and Bethlehem Foundry & Machine Co., grinding mill, (P.), B., 78.

Needham, J., protein metabolism and organic evolution, A., 598. soyllitol in selaohian ontogeny, A., 844.

Neel, E. J. See Woods, D. E.

Neelmeier, W. See Bergdolt, A., I. G. Farbenind. A.-G., and Schweitzer, H.

Nees, A. R. See Shafor, R. W. Nefedieva, O. V., and Pacukov, N. G., laboratory tests of the chemical activity of ashes of solid fuels in relation to refractories, B., 765.

Neff. A. McN., preparation and rearrangement of methylbenzhydryldiohloroamino, A., 57. Negeleln, E. See Warburg, O. Negre, L. See Boquet, A.

Negresco, T., quantitative spectroscopic analysis of alloys, A., 161.

sensitivity of spectral lines, A., 161.

Nehring, K., "kalkaumon" [as fertiliser], B., 569.

saltpetre [fertiliser] question, B., 788.

influence of soil reaction on the conversion of different forms of nitrogen in the soil and their utilisation by plants, B., 951.

Neidich, S. A., apparatus for dehydrating viscoso, (P.), B., 773. Neill, M. H., and Dewar, M. M., plasma proteins in leprosy, A., 92.

lipase in the blood-serum of lepers, A., 92.

Neill, O. S., preparation of an iron compound from solutions of iron [waste pickle liquors, etc.] and its conversion into iron

oxide, (P.), B., 53.

Nejedly, V., polarographic studies with the dropping mercury cathode. II. Influence of temperature, A., 885.

Nekludov, V. N., and Chalatov, S. S., comparison of gravimetric and colorimetric methods of cholesterol determination in blood-

serum, A., 837.

Nekludov, V. N. See also Goldberg, J. M.

Nekrassov, A. S. See Nekrassov, V. V.

Nekrassov, B., b. p. in homologous series, A., 497.

b. p. of hydrocarbons, A., 872.

Nekrassov, V. V., and Komissarov, J. F.,  $\beta$ -chloroethyl carbonate and sulphate, A., 1269. Nekrassov, V. V., and Melnikov, N. N., action of chloropicrin on

mercaptans, A., 1269. Nekrassov, V. V., and Nekrassov, A. S.,  $\beta$ -chloro-substituted

organic compounds of arsenic, A., 800\*.

Nekrassov, V. V., and Sokolov, A. V., quinonoid tautomerism; chlorination of p-nitrophenylacetonitrile, A., 441.

Nekrassov, V. V. See also Nametkin, S. S.

Nekrassova, V. A., saponification of menthyl succinate, acotate, and involved A. 24.

and isovalerate, A., 34.

Nekritsch, M., preparation of artificial white earths, B., 170. Nellensteyn, F. J., and Kuipers, J. P., ultramicroscopy of asphalts

and allied products, B., 231. Nellensteyn, F. J., and Sauerbier, J. C. M., detection of coal-tar pitch in natural and petroleum asphalt mixed with colophony, B., 704.

Neller, J. R., accuracy of the Gutzeit method for [determining] arsenic, A., 1256.

Nelles, L. H., [bar-forming device for] soap-making, (P.), B., 179. Nelson, D. H., effects of manganese sulphate and chloride on

nitrification, B., 831.

Nelson, E. E. See Pattee, G. L.

Nelson, E. K., modified Fichc test for detection of artificial invert sugar in honey, B., 867.

organic acids of sugar-cane molasses, B., 952.

Nelson, E. K., and Browne, C. A., constitution of glucic acid, A., 541.

Nelson, E. M., and Jones, D. B., determination of vitamin-A, A., 103.

Nelson, H. E. See Brown, C. R. Nelson, H. T. See Carter, W. W.

Nelson, J. M., and Papadakis, P., inactivation of invertaso and raffinase by heat, A., 101.

Nelson, O. A., vapour pressure of fumigants. I. Methyl, ethyl, isopropyl, and sec. butyl chloroacetates. II. Methyl, ethyl, n-propyl, n-butyl, sec.-butyl, and isobutyl formates, B., 114. Nelson, O. A. See also Young, H. D. Nelson, P. M. See House, M. C.

Nelson, P. R., lime penetration resulting from surface application to pasture land, B., 532.

Nelson, R. A., and National Aniline & Chemical Co., Inc., production of benzidine and derivatives, (P.), B., 772.

Nelson, R. E., and Rothrock, H. S., acyl derivatives of o-amino-phenol. V., A., 1291.

Nelson, R.M., and Gravatt, G.F., tannin content of dead chestnut trees, B., 950. Nelson, V. E. See McCay, C. M.

Nelson, W. L., and Cretcher, L. H., alginic acid from Macrocystis pyrifera, A., 910.

Nemec, A., action of glycerophosphatase of plant seeds and

enzymic synthesis, A., 222.

Němec, A., and Kvapil, K., influence of various forest types on nitrate content and formation in forest soils, B., 31.

Němec, V. Sco Kubelka, V. Nemetz, G. Sco Friedmann, L.

Nemirovski, G., oxidation and polymerisation of sunflower oil, B., 218.

Nenitzeseu, C. D., derivatives of 4:5:6:7-tetrahydroindole. III. Polynuclear derivatives of 4-keto-3:6:6-trimethyl-4:5:6:7tctrahydroindole, A., 451.

derivatives of 5-hydroxy-2-methylindole, A., 1182.

action of iodine on the alkali derivatives of acinitro-compounds, A., 1433.

Nenitzescu, C. D., and Scortzeanu, V., derivatives of 4:5:6:7-tetrahydroindole. II. Derivatives of 4-keto-3:6:6-trimethyl-4:5:6:7tetrahydroindole, A., 451. Nenitzeseu, C. D. See also Minovici, S.

Neogi, P., and Bhattacharyya, R. C., action of magnesium amalgam on nitrates, and its action on nitrous acid, and salts of the oxy-acids of sulphur and the halogens, A., 1025.

Neogi, P., and Ghosh, M. G., preparation of dithiophosphates and some new dithiophosphates, A., 1406.

Neogi, P., and Mukherji, S., period of induction in chemical reactions: action of hypophosphorous acid on copper salts, A., 1395. Nepveux, F. See Labbé, M. Nerad, A. J. See Brit. Thomson-Houston Co., Ltd.

Nerad, H., dependence of the bleaching number [of pulp] on the course of the cooking in the Ritter-Kellner process, B., 592.

Neresheimer, H. See Grasselli Dyestuff Corp., and Lüttringhaus, A. Neri, A., 2-phenyl-aβ-naphth-1:2:3-triazolemonosulphonic acids, A., 1184.

Nes, G. E. van, manufacture and use of adsorbing agents con-

taining silica, (P.), B., 642.
Nesmejanov, A. N., double salts of benzenediazonium iodido with mercuric iodide and the formation of diphenyliodonium salts by their decomposition, A., 438.

organic compounds of mercury. I. Synthesis of aromatic organomercury salts, A., 711.

Nesmejanov, A. N., and Kahn, E. J., organic compounds of mercury. II. Preparation of symmetrical, aromatic, organomercury compounds, A., 711.

Nestlé & Anglo-Swiss Condensed Milk Co. (Australasia), Ltd., means for ascertaining the percentage composition of substances after a given dilution and vice versa, (P.), B., 545.

Nethercot, IV. Sec Townsend, J. S. Netscher, H., silicic acid in beer. I. and II., B., 145, 833.

Netter, H., electrolyto equilibria at elective ion-permeable membranes and its biological significance, A., 503.

Netter, R. See Dufraisse, C. Nettmann, P., testing [ageing] of paints, B., 609.

setting processes [of paints], B., 825.

Netuka, V., conductimetric control of the rendement of centrifuged

[beet] sugar, B., 223. Netuka, V. See also Hac, R. Netzel, A. E. See Hansard, C. S.

Neubauer, H., the seedling method [for determining soil nutrient values], B., 571.

Neuberg, C., dimethyldchydroresoroinol as reagent for aldehyde, and carbon assimilation, A., 297. use of methyl-alcoholic barium hydroxide, A., 677.

behaviour of sodium glucoscsulphite with yeast, A., 1340.

Neuberg, G., and Jacobsohn, K.  $\hat{P}$ ., range of action of the phosphatases, A., 99.
Neuberg, C., Jacobsohn, K. P., and Wagner, Joachim, formation

and fission of glucosides as a method for chemical and biochemical separation of racemic alcohols into their optically active forms, A., 907.

Neuberg, C., and Kobel, M., desmolytic formation of methyl-

glyoxal by the enzymes of yeast, A., 354. biochemical conversion of dihydroxyacetone into hexose by fermentation and the velocity of fermentation of dihydroxy acctone in relation to its heat of combustion. I., A., 354.

Neuberg, C., and Kobel, M., question of the identity of mutase and ketoaldehyde mutase, A., 472. isolation of methylglyoxal in lactic acid fermentation, A., 722.

isolation of methyl alcohol from tobacco smoke, A., 729. desmolytic formation of methylglyoxal by yeast, A., 1200.

Neuberg, C, and Scheuer, M, detection and isolation of biochemically formed methylglyoxal as its dioxime, A., 1426.

Neuberg, C. See also Kitasato, T. Neubert, O. See Günzler, H.

Neue Glühlampen Ges.m.b.H. Sec Falk Stadelmann & Co., Ltd.

Neuendorff, G. See Sauerwald, F. Neufeldt, H., evaluation of radium preparations with the electron counting tube by the y-ray method, A., 1124.

Neugebauer, H. See Weber, L. J. Neugebauer, W. See Grasselli Dyestuff Corporation.

Neugeborn, A., determination of the surface area of soils by adsorption of liquids, B., 570.

Neuhaus, L. See Dilthey, W.

Neuman, L. J., mechanism of spark discharge, A., 618.

Neumann, and Scheyer, detection of oxygenated salts in flour, B., 620.

Neumann, A., [colorimetric] determination of hydrogen-ion concentration of salt solutions, A., 413.

Neumann, B., reaction mechanism in the sulphuric acid contact process and the action of promoters, B., 205.

ancient glasses. IV., B., 776.

Neumann, B., Domke, R., and Altmann, E., vapour pressure of some salt solutions of importance in the ammonia-soda process, B., 391.

Neumann, B., and Goebel, E., efficiency of different contact substances for the sulphuric acid contact process. II., B., 51.

Neumann, B., and Müller, Georg, thermo-chemistry of hypochlorous acid and some of its salts in aqueous solution, A., 1238. Neumann, G., determination of the calorific value and analysis of coal gas, B., 929.

Neumann, J. von, and Wigner, E., explanation of some properties of spectra in terms of the quantum mechanics of the spinning electron, A., 117.

Noumann, W., high-frequency hysteresis loss in steels, A., 383. Neumayer, K., examination of therapeutic preparations, B., 263. Neumeister, A. See Cornec, E.

Neunhoeffer, M., infra-red emission bands under high dispersion, A., 975.

Neurath, J., lead-base bearing metal containing zinc, (P.), B.,

Neuscheller, J. See Ohle, H.

Neuwirth, F., removal of sulphur compounds from gases, (P.), B., 233.

Neuwirth, I., and Wallace, G. B., use of magnesium as an aid in anæsthesia, A., 469.

Neville, F. W. See Jackman & Co., Ltd., J. W.

Neville, H. A., and Jones, H. C., study of hydration changes by a volume change method, A., 1416.

Neville, H. A. See also Theis, E. R.

Neville Chemical Co. See Emery, R. L.

New, A. L. Sec Davis, D. W.

New Departure Manufacturing Co. See Vuilleumier, A.

New Jersey Zinc Co., reduction of zinciferous materials, (P.), B.,

New Jersey Zinc Co. See also Breyer,  $F.\ G.$ , and Peirce,  $W.\ M.$  New Process Metals Corporation. See Miesse,  $R.\ E.$  New Process Multi-Castings Co. See Moldenke, R.

Newall, H., and Crosfield & Sons, Ltd., J., apparatus for separating fluids from solids, (P.), B., 307.

Newbery, E., single potential of the copper electrode, A., 768. single potential of the nickel electrode, A., 768.

Newbery, G., and Phillips, M. A., amino-3-hydroxy-1:4-benzisooxazines, A., 78.

Newbery, G., Phillips, M. A., and Stickings, R. W. E., heterocyclic arsenic compounds. II. Derivatives of 1:4-benzisooxazine, A.,

Newbold, A. A., spectrum emitted by a carbon plate under bombardment, A., 615

Newbould & Partners, Ltd., M. See Morgan, J. S.

Newbound, R. See Brit. Thomson-Houston Co., Ltd. Newby, C. F. J., colouring of cellulose acetate solutions, B., 443. Newcomb, C., interpretation of nutritional experiments, A., 95.

determination of manganese in the presence of silica, A., 164. Newell, M. H., and Alloys Co., production of a metal-dust [zinclead] mixture, (P.), B., 61.

Newhouse, R. C., process and apparatus for transferring heat, (P.), B., 78.

Newhouse, R. C. See also Allis-Chalmers Manuf. Co.

Newitt, D. M., gaseous combustion at high pressures. XIII. Molecular heats of nitrogen, steam, and carbon dioxide at high temperatures, A., 1147.

Newitt, D. M., Byrne, B. J., and Strong, H. W., equilibrium in the system methyl alcohol-hydrogen-carbon monoxide, A., 508. Newitt, F. T., La Plant, S. H., Turner, L. I., and L.T.N. Manufacturing & Development System, production of oil-gas, (P.),

B., 668. Newkirk, W. B., and International Patents Development Co., manufacture of dextrose, (P.), B., 833.

Newlands, G., Scottish soil types with special reference to North-East Scotland, B., 258.

Newlands, G. See also Hendrick, J.

Newlin, L. G. See Meldrum, W. B.

Newman, F. H., continuous spectrum of hydrogen, A., 118. electric arc in gases at low pressures, A., 166.

electric arc in mixed gases, A., 1121.
Newman, R. K., colloidal lead in cancer treatment, A., 1330.

Newmark, H., working up solutions obtained by leaching ores which have been subjected to chlorination roasting, (P.), B., 781. Newport Co. See Adams, R., Tinker, J. M., and Weiland, H. J. Newson, J. F., disintegration of [low-grade, ore-bearing] clays

and similar materials, (P.), B., 288.

Newton, E. B. See Benedict, S. R.

Newton, H. P. See Groggins, P. H. Newton, R. F, equilibrium of silver oxide and silver chloride with aqueous potassium chloride and potassium hydroxide, A., 141.

Ney, A. H., flotation of ores, (P.), B., 135. Ni, T. G. See Lim, R. K. S.

Niacet Chemicals Corporation. See Herrly, C.J.

Niagara Electro Chemical Co., Inc. See Baum, G.

Nicholas, S. D. See Cooper, E. A.

Nicholas, W. W., continuous spectrum X-rays from thin targets,

Nicholls, J. R., sp. gr. and immersion refractometer readings of dilute mixtures of acetone and water, B., 162.

detection of prohibited vegetable and coal-tar colours in foodstuffs, B., 621.

Nicholls, J. R. See also Adams, C. A. Nicholls, P., Augustine, C. E., and Landry, B. A., tests of bituminous caking coal in a large low-pressure heating boiler, (P.), B.,

Nichols, E. L., and Howes, H. L., transformation spectrum of the ruby, A., 488.

Nichols, M. S., stabilised starch indicator, A., 1411. Nicholson, H. H., and Pantin, B., leaching-out of autumnal dressings of nitrogenous fertilisers, B., 488.

Nicholson, S. B., and Perrakis, N. G., presence of the absorption line  $D_3$  in the solar spectrum, A., 223.

constitution of the solar atmosphere and identification of boron in the spots, A., 739. Nicholson, V. S. See Anderson, C. G.

Nicloux, M., production of carbon monoxide by the oxidation of dextrose in alkaline solution by oxygen or air; biological consequences of this reaction, A., 86.

apparatus for the micro-determination of carbon by the method of Nicloux, A., 204.

oxidation of dextrose in alkaline solution with formation of carbon monoxide, A., 298.

formation of carbon monoxide by the action of oxygen or air on dextrose in alkaline solution; influence of temperature and alkalinity, A., 683

Nicloux, M., and Scotti-Foglieni, L., absorption of ethyl chloride by blood, serum, and water, A., 339.

Nicodemus, O. See I. G. Farbenind. A.-G.

Nicol,  $H_{\cdot}$ , colloidal gold, A., 259.

anaërobiosis and the use of alkaline solutions of pyrogallol, A., 858.

optimal hydrogen-ion concentrations in colloidal gold in the Lange test., A., 954.

water content of essential oils and turpentine, B., 797.

Nicol, H. See also Drakeley, T. J.

Nicolitch, V. See Formeau, E.
Nicolls, J. H. H., air-drying of Canadian lignites, and the reabsorption of moisture by the same, B., 40. nature of sulphur in Canadian coal and coke, B., 40.

Niedenthal, A., red-shortness [of steel], B., 854.

Niedercorn, J. G. See Merrill, H. B.

Niedergesass, B. F. See Brit. Thomson-Houston Co., Ltd.

Niederhauser, W. S., and Hulett, G. A., polarisation in standard cells, A., 1147.

hysteresis in standard cells, A., 1147.

Niederhoff, P., ultra-violet spectroscopic investigation of  $\beta$ -ketogluconic acid, A., 425.

dependence of the blood-sugar curve on the sugar preparation

used, A., 1096.

Niederl, J. B., micro-extraction method, A., 417.

micro-determination of vapour density, A., 786.

Niederl, J. B. [with Ambinder, N., Casty, R., Knowles, D. W. C., Rappaport, I., and Saschek, W.], condensations of ketones with phenols. III. Condensation products of mesityl oxide and monohydroxybenzenes, A., 1181.

Niederl, J. B., and Casty, R., new condensation of ketones with phenols. II. "Cresol-phorones," A., 551.
Niederl, J. B., and Müller, Ralph A., micro-potentiometric deter-

mination of reducing carbohydrates, A., 948.

Niederl, J. B., and Silbert, (Miss) E. P., gravimetric microdetermination of molybdenum, A., 417.

Niederländer, K. See Funk, H., and Reindel, F. Niedringhaus, C. I., Mesta, L. W., and Mesta Machine Co., chilled cast-iron roll, (P.), B., 329.

Niel, C. B. van, Kluyver, A. J., and Derx, H. G., aroma of butter, A., 1099.

Nield, A. See Moseley & Sons, Ltd., D. Nielsen, H., and Laing, B., manufacture of water-gas, (P.), B., 8. coating or impregnation of granular, pulverulent, or powdered materials with liquid compositions, and manufacture of briquettes, etc., (P.), B., 272.

distillation of carbonaceous materials, tar sands, oil-bearing limestone, etc., and apparatus for subjecting the gases and vapours to the action of liquids, (P.), B., 346.

distillation of solid carbonaceous or oil-bearing materials, (P.), B., 347.

rotary retorts for the distillation or heat treatment of carbon-

aceous materials, (P.), B., 968. distillation of solid carbonaceous materials and manufacture of briquettes, (P.), B., 968.

Nielsen, H., Laing, B., and Sensible Heat Distillation, Ltd., apparatus for manufacture of water-gas, (P.), B., 670\*.

Nielsen, H. See also Laing, B., and Patart, G.

Nielsen, H. H., near infra-red vibration spectrum of the carbonates, A., 119.

Nielsen, H. H. See also Randall, H. M.

Nielsen, J. R., specific resistance and purity of sodium electrolysed through soda-glass, A., 1225.

Nielsen, K. W., treatment of coal tar, (P.), B., 233.

Nielsen, N., and Smidth & Co., F. L., feeding cement slurry to rotary kilns, (P.), B., 475\*.

Nielsen, N. A., blood-sugar in insulin-treated diabetes, A., 1100. Nielsen, N. A., and Widmark, G. E., effect of hydrazine, hydroxylamine, and aminoguanidine on the excretion of uric acid, A.,

Nielsen, N. J., production of dry powders from solutions, emulsions, suspensions, etc., (P.), B., 307.

[apparatus for] pasteurising or sterilising milk or other liquids, (P.), B., 376.

Nielsen, O. J., oscillations of blood-sugar values within brief periods and the blood-sugar curve on uniform ingestion of dextrose, A., 89.

Nielsen, O.J. See also Gram, C.N.J.

Nielsen, R. F., free energy charts for predicting equilibrium

pressures and concentrations, A., 1013.

Nielsen, R. F., and Liebhatsky, A. A., determination of the activity of one substance from that of another by a cell with a liquid junction, A., 269.

Nielsen, W. M., critical potentials below 4.7 volts for negative ion formation in mercury vapour, A., 1353.

Niemann, C. See Freudenberg, K.

Niemann, G. See I. G. Farbenind. A.-G.

Niemann, J. See Borsche, W.

Niemierko, W., influence of work on the fat content of frog muscle, A., 845.

Nienstadt, A. E., and Streger, Inc., A. F., malt and maltose preparation, (P.), B., 491.

Nierinck, E., [autoclave treatment for] preservation of eggs and other perishables, (P.), B., 909.

Nies, F., effect of addition of iodine on the conductivity of solutions of halogen salts of sodium, lithium, and potassium in mixtures of alcohol and acetone, A., 268.

Niessen, K. F., saturation of the electric and magnetic polarisation of gases in quantum mechanics, A., 1133.

a gas in crossed fields according to the quantum mechanics,

A., 1361.

Niessner, M., separation of beryllium from aluminium, iron, and copper by 8-hydroxyquinoline, A., 285.

detection of sulphide segregations in the presence of phosphide segregations [in iron and steel] by Feigl's reagents, B., 942.

Niethammer, A., micro-determination of m. p. using a thermoelement, A., 902. [detection of germinable seeds by] determination of acet-

aldehyde [content] by Griebel's micro-method, A., 960. permeability of plant cells in relation to the action of mercury

on seeds, A., 960. angiosperm seeds and factors in germination. IV. Permeability to dyes and salts of the skin of fruits and seeds, A., 1112.

detection of fats and their constituents, A., 1114.

micro- and histo-chemical identification of alkaloids, A., 1348. basis of the chemical stimulation of the higher plants, B., 694. detection of rancidity of fat in whole seeds and fruits, B., 727. testing of seeds and other products by means of the quartz

lamp, B., 736.
Nietz, A. H., and Lambert, R. H., ring method for determining surface tension, A., 1378.

Nietz, A. H. See also Sheppard, S. E.

Nietz, E., quantitative electrolytic reduction. I. Reduction of tervalent to bivalent iron, A., 406.

quantitative electrolytic reduction. II. Reduction of nitric acid, A., 406.

Nieuwenburg, C. J. van, one-component system silica. III. Stab-

ility regions of quartz, tridymite, and cristobalite, A., 637. Nieuwenburg, C. J. van, and Pieters, H. A. J., hydrated aluminium silicates. I. Rehydration of metakaolin and synthesis of kaolin, A., 280.

hydrated aluminium silicates. II. Dehydration vapour pressure of kaolin, A., 636.

Nieuwenburg, C. J. van, and Schontens, W., apparatus for rapid sedimentation analysis, B., 1.

Nieuwland, J. A., and Canadian Electro Products Co., Ltd., manufacture of condensation products [synthetic resins], (P.), B.,

Nieuwland, J. A., See also Matheson, H. W. Niewodniczanski, H., influence of a magnetic field on the fluorescence of mercury vapour, A., 979.
Nifontova, S. S. See Velikovski, A. S.
Nightingale, E. See Andersen, A.
Nightingale, G. T., and Robbins, W. R., nitrogen metabolism in

Polyanthus narcissus, A., 612.

Nightingale, G. T., Schermerhorn, L. G., and Robbins, W. R., growth of the tomato as correlated with organic nitrogen and carbohydrates in roots, stems, and leaves, A., 728.

Nigmann, G. Seo Bickel, A., and Chaskin, L.
Nikitin, V. V., faltl ore, A., 1263.
Nikitine, S. See Ribaud, G.
Niklas, H., Pürchkauer, R., and Poschenrieder, H., calcareous soils of Bavaria, A., 420.

Nikola, P. C. See Douwesdekker, K.

Nikolai, N. A., and Vorobiev, N., determination of sulphur in coal, B., 666.

Nikolaiev, V. J., partition of strong bases and strong acids in saturated aqueous solutions, A., 1010. hydrates of lithium thiocyanate, A., 1387.

Nikolaiev, V. J., and Krastelevskaja, S. A., mechanism of Salkovsky's colour reaction with cholesterol, A., 61.

Nikolsky, K., derivation of the dispersion formula according to the Dirac theory of the electron, A., 1125.

Nikonov, V. See Zessevitsch, V. Nikonova, L. S. See Tronov, B. V.

Nikuradse, A., conduction of electricity and discharge in dielectric liquids, A., 21.

Nile, S. W., jun. See Loomis, F. W.
Nilov, V. I., essential oil from seeds of Smyrnium perfoliatum, L., B., 339. composition of the essential oil from Sesseli dychotomum, B.,

339. Nilssen, J. C., burner for liquid fuels, (P.), B., 746.

A., 476.

B., 409.

to blood pigments, A., 727.

Nilssen, S. See Hassel, O. Nilsson, H. See Euler, H. von. Nilsson, M., and Fleischmann Co., food product, (P.), B., 301. Nimmo, R. R., and Feather, N., ranges of the long-range a-particles. from thorium-C and radium-C, using an expansion chamber, A., 371. Nimmo, R. R. See also Feather, N.Nims, L. F., and Bonner, W. D., solubility of galena and some load concentration cells, A., 653. Nininger, H. H., meteorite from Ballinger, Texas, A., 1035. Nisbet, H. B., reduction of nitro-compounds by aromatic ketols. II. Some o., m., and p-azoxy-compounds, A., 181. Nisbet, H. B. See also Boon, A. A. Nisbet, R. See Continuous Coal Carbonisation, Ltd. Nishi, T., and Ishlguro, Y., high-frequency spark discharge in air, A., 1353. Nishikawa, S., and Kikuchi, S., diffraction of cathode rays by calcito, A., 124.
Nishikawa, T., secretin. II., A., 1202.
Nishimura, H., aluminium-copper-nickel system with aluminium as the chief constituent, A., 883. Nishimura, Y. Seo Hayashi, K. Nishina, Y., polarisation of Compton scattering according to Dirao's new relativistic dynamics, A., 5, 373, 486. Nishina, Y. See also Klein, Oskar. Nishiyama, S., nicotine content of fresh tobacco leaves, B., 796. Nishiyama, Z., elastic constants, lattice constants, and densities of metallic solid solutions, A., 1374. Nishizawa, K., Twitchell fat-splitting reagents, B., 946.
 Nishizawa, K., and Hachihama, Y., phase-rule study of the removal of sugar from molasses. I. Ternary system sucrosewater-barium oxido or strontium oxide, B., 694. Nishizawa, K., and Sinozaki, M., sulphonated oils. V. Preparation of ricinoleic acid sulphuric ester from ricinoleic and sulphuric acids, A., 1424. Nishizawa, K., and Winokuti, K., sulphonated oils. I. Preparation of pure sodium ricinoleosulphate and its isolation from commercial sulphonated oils, B., 363. sulphonated oils. II. Hydrolysis of ricinoleosulphuric acid or its sodium salt, B., 402. Nisi, H., Raman effect in crystals, A., 742. Nissen, B. H. Seo Hunziker, O. F. Nistler, A., dispersoid analysis by means of a diffusion apparatus, A., 962. Nistler, J. See Bernhaner, K.
Nitardy, F. W., and Squibb & Sons, E. R., production of [vitamin-bearing fish-liver] oils, (P.), B., 862. Nitardy, F. W., and Tapley, M. W., stability of anesthetic other, Nitchie, C. C., quantitative analysis with the spectrograph, A., 412. Nitrogen Engineering Corporation, synthetic production of ammonia, (P.), B., 516. Nitrogen Engineering Corporation. See also Richardson, R. S. Nitschke, A., importance of the membrane in the measurement of the osmotic pressure of plasma-protein, A., 88. effect of administration of amino-acids on the structure of plasma-protein, A., 1193. Nitta, I., crystal structure of some rhombic formates, A., 16. Nitta, I. See also Coster, D. Nittinger, C., paints and coments having a metallic lustre, (P.), B., 255. Nitzescu, I. I., ephedrine and blood-sugar, A., 97. Nitzescu, I. I., and Benetato, M., hyphophysin and gluconcogenosis, A., 102. Niven, C. D. See McLennan, J. C. Nixon, F. C., electrolytic apparatus, (P.), B., 62. Nixon, J. See Hodgson, H. H. Nlyogi, S. C., organo-antimony compounds. III., A., 336. Njankovskaja, R. See Pentegov, B.

Noble, A., and Federal Phosphorus Co., production of phosphoric acid, (P.), B., 681.

Noble, E. E. See Stirling Boiler Co., Ltd.

Nocken, T. See Bergdolt, A. Noddack, (Frau) I., physical constants of rhenium, A., 21.
Noddack, (Frau) I., and Noddack, W., oxygen compounds of rhenium, A., 411, 1027 preparation of a gram of rhenium, A., 1408.

Noddack, W. See Eggert, J., and Noddack, (Frau) I.

Noden, T. J., rotary [gas] scrubber and washer, (P.), B., 349\*.

Nodzu, R. See Baker, W., and Duclaux, J. Noël, L. von, coffee berry oii, B., 254. Noeggerath, J. E., electrolytic apparatus [for electrolysis of water etc. under pressure], (P.), B., 688. Noel, F. A. G. See Empson Centrifugals, Ltd. Noelting, E., [preparation of] derivatives of s-m-xylenol, B., 163. [properties of] ohrome colours on wool, B., 715. Noetzel, B. Seo Habler, C. Noguchi, T., separation of hexone bases by electrolysis, A., 431. constituents of corn-silk, A., 613. Noguchi, T. See also Sahashi, Y. Nolan, O.L. See Bailey, E.M.Nolan, P.J., recombination of ions in atmospheric air. II. Law of recombination of ions and nuclei, A., 861. Nolan, P. J., and O'Brolchain, C., recombination of ions in atmospheric air. I. Investigation of the decay coefficient by Schweidler's method, A., 861. Nold, A., crystal structure. II., A., 1222 Noll, A., new raw materials for the [cellulose] lacquer industry, В., 365. analysis of motor fuols containing alcohol, B., 768. Nollau, E. H. See Du Font de Nemours & Co., E. I. Nolle, J., assay of belladonna, B., 796. Noller, C. R., zinc alkyls; preparation and use in synthesis of hydrocarbons, A., 433.
Nonaka, M., soap. VIII. Adsorption of soap at the contact surface of two liquid phases, A., 641.

Noordendorp, H. See N.V. Neckar Waterreiniger Maatschappij. Norbury, A. L., method of measuring the electrical resistances of alloys, A., 632. constitutional diagrams for cast irons and quenched steels, B., 436. Nord, F. F., influencing the speed of enzymic reactions, (P.), B., **994.** mechanism of enzyme action and its action in breadmaking, B., 1028. Nord, F., and Deuel, H. J., animal calorimetry. XXXVII. Specific dynamic action of glycine in normal and adrenalectomised dogs, A., 94. Nord, F. F., and Weichherz, J., mechanism of enzyme action. III. Relation between enzyme action and adsorption. IV. Enzymic processes in germinating barley, A., 1200. mechanism of enzyme action. V. Kinetics of cell fermentation treated from the point of view of a reaction in a closed space, A., 1397. Nordberg, M. E. See Ramsperger, H. C. Norddeutsche Hefeind.-Akt.-Ges., manufacture of durable yeast, (P.), B., 450. Norddeutsche Verwaltungs-Ges.m.b.H., fining of freshly spun artificial silk threads, (P.), B., 714. Nordell, C. H., separation of comminuted matter from the liquid in which it is immersed; [thickener], (P.), B., 741.

Nordell, E., and Permutit Co., manufacture of base-exchange silicate, (P.), B., 54. Noack, K., origin of chlorophyll and its relation to blood pigments, Nordheim, L. W., effect of the image force on the emission and reflexion of electrons by metals, A., 115, Noack, K. [with Wehner, O., and Grlessmeyer, H.], deleterious resistance of alloys, A., 127. action of smoke gases on vegetation, B., 259.

Noack, K., and Kiessling, W., origin of chlorophyll and its relation theory of electron emission of metals, A., 487. Nordiske Fabriker De No Fa, A./S., and Holmboe, C. F., electrode for use in apparatus for the decomposition of gases, (P.), B., 527. Nordlander, B. W. See Brit. Thomson-Houston Co., Ltd. Nordström, A. M., [acid from] Finnish pine resin, A., 573. Noack, M., examination of the "effect factors" of the three principal nutrients of cultivated plants and of the determination of the nutrient content of soils according to Mitscherlich, Norgate, R., method and apparatus for washing coke, pan-ash, coal, etc., (P.), B., 272.

Noar, R. J., manufacture of sponge rubber, (P.), B., 653\*.

Nobel, N., extracting substances from solid materials, (P.), B., 3.

Nobel Industries, Ltd., Burke, C. E., and Hopkins, H. H., synthetic resins and the like, (P.), B., 1023\*.

Nobel Industries, Ltd. See also Du Pont de Nemours & Co., E. I.

Nobel's Explosives Co., Ltd. See Schaff, G. E. Norman, A. G., biological decomposition of pectin, A., 850. chemical constitution of the gums. I. Nature of gum arabic and the biochemical classification of the gums, A., 856.

Norman, D. B. See Woodman, H. E.

Normann, W., sodium saponification value, B., 689.

Norris, E. R., and Danielson, I. S., biological and colorimetric assay of vitamin-A in fish oils, A., 1202.

Norris, F. W., nature of the pectic substances of flax, A., 729.
Norris, G. O. Soe Stevens, R. H.
Norris, J. F., reactivity of atoms and groups in organic compounds. VIII. Relative reactivities of hydroxyl groups in certain alcohols, A., 1244.

Norris, J. F., and Davis, H. S., production of alcohols from butenes and pentenes through interaction with sulphuric acid,

Norris, J. F., and Prentiss, S. W., reactivity of atoms and groups in organic compounds. VII. Influence of solvents on reaction velocity; adjuvance, A., 47.
Norris, R. V. See Narayanamurtl, D., Patwardhan, V. N.,

Subrahmanyan, K., and Thakur, A. K.

Norris, W. S. Sco Birch, S. F.Norrish, R. G. W., velocity coefficient of a homogeneous bimolocular gas reaction, A., 33.

photochemical equilibrium in nitrogen peroxide. II. Dependence of quantum efficiency on wave-length, A., 893.

photochemical equilibrium in nitrogen peroxide. III. Comparison of the thermal, photochemical, and electrical decompositions, and a general theory of the change. IV. Relation between fluorescence and photochemical action, A., 1022.

Norrish, R. G. W., and Griffiths, J. G. A., photochemical decomposition of glyoxal, A., 37.

Norrish, R. G. W., and Smith, F. F. P., photochemical catalysis; reaction between nitrie oxide and cyanogen and its mechanism, A., 37.

Norsk Hydro-Elektrisk Kvaelstof Aktieselskab, production of fertilisers, (P.), B., 572.

Norsk Hydro-Elektrisk Kvaelstof Aktieselskab. See also Halvorsen, B. F.

Norske Aktieselskab für Elektrokemisk Industri of Norway. See

Sem, M. O.Norske Zink Kompani A./S., removal of magnesium oxide from zinc sulphate electrolytes, (P.), B., 217.

North, C. E., manufacture of beverages comprising a mixture of

milk and cocoa or a cocoa preparation, (P.), B., 226. North, C. C., effect of increased quantities of stearic acid on

[rubber] tread abrasions, B., 827.

North, C. O., Christensen, C. W., and Rubber Service Laboratories
Co., vulcanisation of rubber, (P.), B., 864\*.

Northrop, J. H., permeability of dry collodion membranes. II., A., 392.

chemical and physical changes in gelatin solutions during hydrolysis, A., 646.

unequal distribution of ions in a collodion cell, A., 1379. crystalline pepsin, A., 1490.

Northrop, J. H., and Anson, M. L., determination of diffusion constants and calculation of the radius and weight of the hæmoglobin molecule, A., 587.

Northrop, J. H., and Kunitz, M., swelling of gelatin and the

volume of surrounding solution, A., 646.

Northrop, J. H., and Simms, H. S., effect of the hydrogen-ion concentration on the rate of hydrolysis of glycylglycine, glycyllcucine, glycylalanine, glycylasparagine, glycylaspartio acid, and biuret base by eropsin, A., 100.

Northrop, J. H. See also Kunitz, M. Northrup, E. F., [crucible] electric induction furnace, (P.), B., 101.

electrio induction furnace, (P.), B., 289.

Northrup, E. F., and Ajax Electrothermic Corporation, induction electric furnace, (P.), B., 177.

high-frequency induction furnace, (P.), B., 177. Northwestern Yeast Co. See Hill, C. B.

Norton, D. G. See Norton & Co., Ltd., (Sir) J. F.

Norton, J. B., and Lang Bridge, Ltd., rotary drying cylinders [for fabrics, paper, etc.], (P.), B., 470.
Norton, R. A., and Selden Co., plastic composition, (P.), B., 863.

production of non-turbid aldehyde condensation products, (P.),

B., 863. Norton Co., manufacture of abrasive articles, (P.), B., 852. Norton & Co., Ltd., (Sir) J. F., and Norton, D. G., mercerising machines, (P.), B., 679. Norton & Gregory, Ltd. See Murray, H. D.

Norwood, S. M., and Electro Metallurgical Co., thermal decomposition of hydrocarbons, (P.), B., 465.

Norwood, S. M. See also Electro Metallurgical Co.

Nosaka, T., influence of the external temperature on the glycogen and fat content of the liver, and the relations of the external temperature to changes in the thyroid gland and suprarenal capsule, A., 1195.

Noshi, K., hæmolysis and glycolysis, A., 589.
Noskowa, O. J., and Terechina, V. A., iron cacodylate and the determination of cacodylic acid, A., 53.

Noss, F. See Suida, H.

Notkina, L. See Zaleski, W.

Nottbohm, F. E., provisional definitions for preserved milk products, B., 70. honey ash, B., 109.

alkali value of cow's milk, B., 225.

Nottbohm, F. E., and Lucius, F., melezitose in honey-dew honey from the lime, B., 955.

Nottebohm, C. L. See Hock, L.

Notz, H., [rotary drum] filters, (P.), B., 116.

Notz, H., and Maschinenfabrik Buckau R. Wolf Akt.-Ges., [rotary drum] filter, (P.), B., 381\*.

Nouvel. See Travers, A.

Novadel-Agene Corporation. See Loon, J. van.

Novák, H., and Hubácek, J., liquefaction of coking coal, B.,

Novak, I.J., and Raybestos Co., manufacture of friction elements, (P.), B., 40.

Novak, J., plant nutrient content of mud from clarifying basins of [beet-]sugar factories, B., 791.

Novelli, A., fluorene series; action of benzaldehyde on 2:7-diaminofluorenc and the relation of fluorene to diphenyl; action of phthalic anhydride on 2:7-diaminofluorene, A., 1438.

Novikov, V., prevention of autoxidation of vegetable oils and their fatty acids, B., 27.

Novosilzev, N., electrical spectrum of water with undamped oscillations in the wave-length range 3000-2200 mm., A., 1129. Novotny, E. E., and Romleux, C. J., resinous condensation product of phenol and cellulose, (P.), B., 826.

Nowosielski, T., characterisation and classification of gasolines, B., 231.

Nowotny, E. Sce Zehenter, J.

Noyes, A. A., and Steinour, H. H., potential of inert electrodes in solutions of sulphurous acid and its behaviour as an oxidising and reducing agent, A., 769.

Noyes, W. A., interaction between nitrogen trichloride and nitrio oxide; reactions of compounds with odd electrons, A., 158. electronic interpretation of oxidation and reduction, A., 1129.

Noyes, W. A. See also Bennett, C. W. Noyes, W. A., jun., photochemical reaction between mercury vapour and oxygen, A., 660.

Noyes, W. A., jun. See also Pierce, W. C. Nozaki, M. See Kami, Y.

Nuccorini, R. See Ravenna, C.

Nuera Art-Silk Co., Ltd. See Huebner, J. Nürnberger, L., keratohyalin, A., 839.

Nüsslein, J. See I. G. Farbenind. A.-G.

Nugent, R. L. See Bancrott, W. D. Nuka, P., fluorides of manganese and of cadmium, A., 779.

Nunn, E. H. See Marshall, M. J

Nuttall, J. M., and Williams, E. J., optical method for analysing photographs of α-ray tracks, A., 671.

Nuttall, J. M. See also Williams, E. J.

Nutter, E. H., Littleford, J. W., and Minerals Separation North American Corporation, concentration of sulphur, (P.), B., 207. Nutting, R. G., internal pressures in adsorbed films, A., 1141. Nuyl, T. W. te. See Waterman, H. I.

Nyanza Color & Chemical Co., Inc. See Muller, O. F. Nyberg, N., structure of colouring matter, A., 239.

Nyrop, J. E., production of fodder and nutritive products, (P.), B., 147.

treatment of butter, margarine, and similar oil-in-water or water-in-oil emulsions, (P.), B., 376.

manufacture of milk powders, cream powders, etc., (P.), B., 659.

spray drying and the drying of dairy products, B., 761.

0.

Oakley, H. B., plasticity and water absorption of clays, B., 473. Oakley, H. B. See also Joseph, A. F.

Oard, H. C., and Peters, J. P., concentration of acid and base in blood-serum in normal pregnancy, A., 343.

Obaton, F., relation between the carbohydrates digested and

secreted by Aspergillus niger, A., 1492. Oberhard, I. G., keeping chloroform for anæsthesis, B., 338. preparation of a solution of iron albuminate, B., 956.

Oberhauser, F., and Schormüller, J., sensitive test for silicic acid, A., 414.

active molecule of exalic acid, A., 793.

action of cyanogen bromide and hydrogen cyanide on titanium tetrabromide, A., 896.

processes of oxidation; behaviour of cyanogen bromide and hydrogen cyanide towards iron salts, A., 897.

Oberhoffer, P., Hockstein, H., and Hessenbruch, W., oxygen in iron and steel. II., B., 559.

Oberhoffer, P., and Kreutzer, C., systems iron-silicon, iron-chromium, and iron-phosphorus, B., 285.

Oberhoffer, P. See also Wasmuht, R., and Zingg, E.

Oberle, A., and Seofield, T. E., preservation of wood, (P.), B.,

Oberto, S., supposed effect of X-rays in crystal rectifiers, A.,

Oberwegner, M. E. See Madelung, W.

O'Brien, W. J., manufacture of [titanifcrous] lithopone, (P.), B., 728.

O'Brien & Partners, Ltd., S. See Gower, L. H. R.

O'Brolehain, C. See Nolan, P. J.

Obrutscheva, A., adsorption phenomena of silver iodide. II., A.,

Obrutseheva, A. See also Frumkin, A.

Obryadchikov, C. N. See Demchenko, A. D. O'Bryan, H. M. See Smith, K. K.

Occhialini, A., low-voltage sparks as spectroscopic sources, A.,

effect of resistance on spark spectra, A., 479.

length of the spectral lines of a spark in relation to the concentration of the element, A., 734.

Occhipinti, F., seed oil of Citrus limomum, B., 36.

Ochiai, E. See Kondo, H.

Ochoa, S., and Valdeeasas, J. G., micro-determination of total creatinine in muscle, A., 463.

Ochwat, P. See Grasselli Dyestuff Corporation. Ockman, T. See Brit. Celanese, Ltd.

Octron, Ltd., Holt, W., and Stedman, G. H., manufacture of oxide-coated cathodes for use in vacuum electric devices, (P.),

Odam, P., soldering of aluminium, (P.), B., 604.

Oddo, G., solanine, A., 299, 684\*.
constitution of sulphur and nitrogen compounds derived by substitution of the carboxyl group, A., 1169.

Odeen, H., purification of [fatty] oils, (P.), B., 650. Odell, W. W., commercial possibilities in the use of synthetic hydrocarbon processes in the gas industry, B., 383.

carburation of combustible gas with butane and propanebutane mixtures: carburation of water-gas, B., 915.

O'Donoghue, B., Drum, J., and Ryan, H., commercial utilisation of Java citronella oil, B., 452

Öhlin, E. A., drying paper in the form of continuous webs, and papermaking machinery therefor, (P.), B., 555.

Ohman, E. See Persson, E.

Ohman, Y., possibility of observing an emission spectrum of the calcium substratum in the galaxy, A., 965.

Ochme, C., and Török, P., rôle of the blood in transmineralisation, A., 339.

Oel- & Fett-Chemie G.m.b.H., treatment of tall oil, (P.), B., 254. Oel- & Fett-Chemie G.m.b.H., and Schultze & Co. Oelfabr., A., treatment of tall oil, (P.), B., 292.

Olander, A., [physico-chemical] study of bromosuccinic acid. I. Ionic product of water and some other dissociation constants, A., 1384.

[physico-chemical] study of bromosuccinic acid. II. Decomposition of bromosuccinio and acetoacetic acids in aqueous solution. III. Bimolecular reactions in dilute solution, A., 1396.

Ölander, A. See also Euler, H. von.

Oelkers, H. A. See Rona, P.

Ooman, E., colorimetric determination of hydrogen-ion concentration in weakly-buffered solutions, A., 162.

viscosity determinations with artificial silk pulp, B., 49. Orskov, S. L., micro-determination of the ether-soluble organic acids in blood, A., 88.

Oertel, G. See Wieland, H.
Oertel, W., testing of permanent-magnet steel, B., 942.
Oesterle, K. M., formation and properties of very thin electrolytic nickel films, A., 1021.

Oesterreichische-Amerikan. Magnesit Akt.-Ges., and Erdmann, K., binding and hardening moulded articles, (P.), B., 817.

Oesterreichische-Amerikan. Magnesit Akt.-Ges. See also Erdmann, K.

Oesterreichische Chemische Werke G.m.b.H., apparatus for making hydrogen peroxide by distillation of persulphuric acid and persulphate solutions and for the concentration of hydrogen peroxide solutions, (P.), B., 1015.

Oesterreichische Schmidtstahlwerke Akt.-Ges. See Klüger, L.

Östberg, O., citric acid content of normal urine, A., 840.

Oeter, H. D. See Bürger, M. Oettingen, W. F. von, comparison of lactones with santonin. I. Chemical constitution and pharmacological action, A., 1105. Oettingen, W. F. von, and Garcia, F., toxicity and vermicidal properties of the dilactone of acetonediacetic acid and  $\beta$ -angelicalactone in cats; dilactone and  $\beta$ -angelical actone as anthelmintics, A., 1105

Oexmann, H., production of flour-like horn, etc. by grinding,

(P.), B., 446.

colouring of horn masses, (P.), B., 830. O'Flaherty, F. See McLaughlin, G. D.

Ofner, R., application of the Seliwanoff reaction, B., 832.

reagent of low copper content for determining small quantities of invert sugar, B., 832.

Oftedal, I., crystal structure of skutterudite and smaltitechloanthite, A., 18.

lattice dimensions and phase range of the magnetic substance Fe<sub>x</sub>Sb<sub>y</sub>, A., 988. crystal structure of tysonite and some artificial lanthanide

fluorides, A., 1223. Oftedal, I. See also Broch, E., Hassel, O., and Goldschmidt,

V. M.

Ogata, H., pityrol. VII. Distillation of oleic acid, A., 294.

Ogata, K. See Kada, R.

Ogata, S., qualitative reaction of protein. I. Reaction of acid in the acetic acid-sodium chloride test, A., 764. protective action of colloids, A., 1007.

Ogawa, I., and Kodama, K., micro-determination of blood-sugar, A., 950.

Ogawa, Y., and Murakami, T., iron-zinc system, A., 141. Ogawa, Y. See also Osawa, A.

Ogburn, S. C., jun., and Riesmeyer, A. H., determination of palladium by means of 6-nitroquinoline, A., 166.

Ogden, D. L., Valentine, R. E., and United States Metals Refining Co., recovery of selenium, (P.), B., 978.

Ogden, D. P. See Bergman, W. G.

Ogden, E. See Bayliss, L. E.

Ogden, S. A., acetylation of cellulose material, (P.), B., 513. Ogilvie, J., and National Aniline & Chemical Co., Inc., green dye of the anthraquinone series, (P.), B., 591. Oglesby, N. E., system sodium hydrogen carbonate-potassium

hydrogen carbonate-water, A., 1145.

Ogura, K., Shito, T., and Yamano, S., influence of glycine on f. p. depression, A., 1048. O'Harra, B. M., Slagle, E. A., and American Smelting & Refining

Co., manufacture of magnesite bricks, (P.), B., 56. O'Hern, A. T. Sec O'Hern, T.

O'Hern, T., and O'Hern, A. T., nitroglycerin dynamite, (P.), B., 75.

Ohio Brass Co. See Marshall, L. H.

Ohle, H., Marecek, W., and Bourjan, W., compounds of sugars with sulphuric acid. II. Reaction for the differentiation of ring-isomeric, acylated halogeno-sugars, A., 681.

Ohle, II., and Neuscheller, J., model experiments based on the theory of alcoholic fermentation. I. Degradation of dissopropylidenefructose sulphate, A., 913.

Ohle, H., and Othman-Neuseheller, J., manufacture of ethyl alcohol gels, (P.), B., 315. Ohle, H., and Spencker, K., derivatives of the benzylidenemethyl-

glucosides, A., 50.

Ohle, H., and Vargha, L. von, acetone [isopropylidene] compounds of the sugars and their derivatives. XIV. isoDiisopropylideneglucose, A., 1278.

acctone [isopropylidene] compounds of the sugars and their derivatives. XV. 5:6-Anhydroglucose isopropylidene ether

and the 5-methyl ether of glucofuranose, A., 1279. Ohlsson, E., and Swaetichin, T., takadiastase; inactivation and reactivation; importance of these processes in the therapeutic use of the enzyme, A., 721.

Ohlsson, S. See Palmaer, W.

Ohly, E, and Remy, T, potash manuring of sugar beet, B., 993. Ohno, S. See Tanaka, Y.

Ohrt, P. See Giller, T

Ohta, H., and Asahi Garasu Kabushiki Kaisha, production of insulating varnish, which consists principally of rosin and tung oil, (P.), B., 138.

Oil-O-Treat Co. See Woods, D. E. Oilseeds Baling Co., Ltd., and Bunker, S. W., treatment of oilbearing nuts [rubber seeds] prior to transportation or storage, (P.), B., 828.

Oka, K., purification of sodium glutamate, (P.), B., 978.

Okabe, L. See Teruuchi, Y.

Okada, H., Matsuda, T., and Hayakawa, E., purification of wood pulp: Japanese pulp as rayon material, B., 974.

Okada, M., glycogen metabolism of the snail, A., 1483.

Okada, T., existence of the hamolytic complement in human cerebrospinal fluid, A., 1480.

Okamura, Takeji, bufodeoxycholic acid. II., A., 925.

Okamura, Tanotsu. See Kondô, M.
Okamura, Teiji, significance of bile acids in carbohydrate metabolism. V. Effect of diminished bile acid and of excess of bile acid on the sugar content of the blood, A., 597

significance of bile acids in carbohydrate metabolism. Effect of the loss of bile acids and of excessive bile acid administration on the adrenaline content of the suprarenals, A., 597.

O'Kane, W. C. See Hartzell, A.

Okano, T., secretin in Japanese plants, A., 1496. Okayama, Y., promoter action of copper and copper oxide on the reaction  $2H_2 + O_2 = 2H_2O$ . I. Oxidation velocity of copper. II. Reduction of cupric oxide. III. Autocatalysis in the

heterogeneous system, A., 773. Okazawa, T., and Sano, T., Clays. XIII. Flocculative action of hydrophilic sols on suspensions of clays and its practical

uses, B., 557.

Okell, S. A. W. See Wickenden, L.

Ōkido, S., micro-Dumas apparatus, A., 337.

Okkels, H. See Henriques, V.

Okolov, F. S., colorimetric determination of ergot in flour, B., 619. Okolov, F. S., and Akinev, I. G., serological determination of ergot in flour, B., 620.

Okubo, J., and Hamada, H., spectra of alkali metals excited by active nitrogen, A., 615.

Okuda, M., adrenaline content of the suprarenal capsule in the hen embryo, A., 725.

Okuda, Y., determination of cysteine, cystine, and their derivatives in tissues and biological fluids, A., 730.

quantity of cysteine in living tissue proteins and its biological

significance, A., 1191.

Okuda, Y., and Katai, K., effect of amino-acids on methods for the determination of sugar, A., 1114.

Okumura, T. See Yoshimoto, S.

Okunev, N., physico-chemical phenomena during regeneration. III. Determination of hydrogen-ion concentration of the regenerating extremity of the crab (Paralithodes camtschatica),

quinhydrono electrode for measuring hydrogen-ion concentration in very small portions of tissue, A., 1114.

physico-chemical phenomena during regeneration. III. Buffering [effects] in the tissues of regenerating limbs of axolotl, A., 1332.

Okuri, T., binder for laminated mica products, (P.), B., 433\*. Okuyama, D., tyrosinase. I. Oxidation and reduction potentials of the tyrosinase system, A., 1393. Okuyama, M. See Hayashi, K.

Old Ben Coal Corporation. See Laucks, I. F.

Oldberg, E. See Crandall, L. A.

Oldenberg, O., simultaneous energy transfers by collision and radiation, A., 379.

structure and significance of the mercury-inert gas bands, A., 860.

Oldenberg, O., dissociation of molecules by rotation, A., 1368.

Oldershaw, A. W., sugar beet top silage, B., 1026. Oldham, J. W. H. See Irvine, (Sir) J. C.

Oldright, G. L., Keyes, H. E., Miller, V., and Sloan, W. A., precipitation of lead and copper from solution on sponge iron, B., 943.

Oldright, G. L. See also Sullivan, J. D. O'Leary, A. J. See Gray, J. A. Olejniček, H. See Veseley, V. Olin, F. W. See Roberts, J. H.

Olin, H. L., and Jehens, W. J., metallic colloids and knock suppression, B., 159.

Oliphant, M. L. E., action of metastable atoms of helium on a metal surface, A., 738.

Olivari, F., serodensimetric constant (C.S.D.) for detecting the watering of milk, B., 658. Olivarius, H. de F., and California Packing Corporation, recovery

of sucrose from cane molasses, (P.), B., 1027. Olive, T. R., ammonia oxidation in [relation to sulphuric acid]

chamber plants, B., 1013.

Oliveiro, C.J. See Rosedale, J.L.Oliver, D. A., proposed new criteria of ductility [of metals] from a new law connecting the percentage elongation with size of test piece, B., 97.

Oliver, D. A. See also Hartshorn, L. Oliver, J. H., the nitrogen question [in brewing], B., 413.

Oliver, L. W., and Becker, W. T. L., use of cellulose films in photography and kinematography, (P.), B., 738.

Oliver, L. W. See also Becker, W. T. L.

Oliver, R. See Traub, H. P.
Oliver Continuous Filter Co. See Duschak, L. H.
Oliver United Filters, Inc. See Sweetland, E. J.

Oliverio, A. See Vanzetti, B. L.

Olivier, H. R. See Funk, C. Olivier, S. C. J., steric hindrance, A., 405.

hydrolysis of nitriles with orthophosphoric acid, A., 810. hydrolysis of organic compounds in neutral and acid solutions, A., 1397.

Ollard, E. A., theory of chromium plating, B., 522. Ollesheimer, L. J. See Sprucolite Corp.

Olmstead, P. S., effect of gases on the resistance of granular carbon contacts, B., 251.

Olmsted, G. E. See Monaghan, T. S. O'Loughlin, J. A. See Parkinson, T.

Olpin, A. R. See Ives, H. E. Olpin, H. C. See Brit. Celanese, Ltd.

Olsen, A. J. C., and International Yeast Co., Ltd., manufacture of yeast, (P.), B., 34.

Olsen, C., determination of ammonia in soil and adsorptive power

of soil for ammonia, B., 951. Olsen, F., specifications for cellulose for use in the manufacture of smokeless powder, B., 454.

high-explosive composition, (P.), B., 455.

influence of gel structure on the technology of smokeless powder manufacture, B., 962.

Olsen, G. F., recovery of entrained oils from clay, (P.), B., 771. dewaxing lubricants by double centrifuging, (P.), B., 885.

Olsen, G. F., and General Petroleum Corporation of California, acid treatment of lubricating oils, (P.), B., 466. stabilisation of clay-treated [lubricating] oils, (P.), B., 843. Olsen, N. C. See Hedgepeth, L. L.

Olsen, W. C. See Hedgepeth, L. L.

Olson, A. R., and Hirst, L. L., differential pressure gauge, A., 1161.

Olson, A. R., and Teeter, C. E., jun., rate of dissociation of nitrogen tetroxide, A., 1148.

Olson, A. R. Sec also Hirst, L. L., Roseveare, W. E., and Schmitt,

Olson, H. F. See Ellett, A. Olson, O. See Haley, D. E.

Olsson, J. G., and Stenfors, F. I. E., drying processes and plant, (P.), B., 496.

drying methods and apparatus, (P.), B., 1035. Olston, O., centrifugal air-float pulveriser, (P.), B., 626.

Olszewski, W., Olszewski-Keyl water-sampling apparatus, B., 304. Oma, K., sulphur in electrolytic iron and its removal, B., 285.

Oman, E., effect on rosin sizing of heating the moist paper, B., 13.

Onahara, J. See Kita, G.

Oneida Community, Ltd. See Gray, D.

O'Neil, A. S., and Western Cartridge Co., manufacture of propellant powders, (P.), B., 540.

O'Neil, L. J., and Becker, L. B., gas mixer, (P.), B., 965. O'Neill, G. D., and Westinghouse Lamp Co., activation of [tungsten] filaments, (P.), B., 178.

O'Neill, H., hardness of vacuum-annealed crystals of iron, B.,

O'Neill, W. J., and Mercil, E. J., electroplating apparatus, (P.), B., 902.

Ongkiehong, B. L. See Jorissen, W. P., and Kreulen, D. J. W. Onizawa, J., behaviour of cholesterol in the animal body. I. Determination of cholesterol in tissue, A., 952.

Onnertz, P. See I. G. Farbenind. A.-G.

Ono, S., production of choline from the suprarenal capsule, A., 1102.

Onohara, J. See Kita, G.

Onondaga Steel Co., Inc. See Briggs, A.J.

Onorato, E., deposition of sulphur at Monte Solforoso near Sorofano in the province of Rome, A., 535.

Oosterhuis, E. See Dobben, P. W., and Hoist, G.

Oostveen, W., velocity of reaction between iodide and persulphate ions, A., 1016.

Oparin, A., and Kirsanov, A., inactivation of enzymes by tannins, A., 1106.

Opitz, and Rathsack, determination of the nutrient content of arable soils by Mitscherlich's method, B., 487.

Opotzki, V. See Petrenko-Kritschenko, P.

Oppé, A., manufacture of alkali hypochlorites, (P.), B., 18\*.

Oppel, W. W., alimentary blood-sugar curves. IV. Sucrose in blood. V. Lævulose in blood, A., 462.

Oppenheim, R., and Société le Carbone, gas accumulator, (P.), B., 783.

Oppenheimer, A., metabolism in hepatic disease. I. Carbohydrate metabolism, A., 92.

Oranienburger Chemische Fabrik Akt.-Ges., and Chemische Fabrik Milch Akt.-Ges., production and use of stable sulpho-acids of high mol. wt. and their salts, (P.), B., 529, 727. production and use of cleaning, emulsifying, and wetting agents,

(P.), B., 590.

manufacture of sulphonated linseed oil, (P.), B., 862.

Orban, G., and Reiner, L., sources of error and calculation in the measurement of surface tension by the ring method and microbalance, A., 1262.

Orban, G., and Stitz, J., fluorescence of honey in ultra-violet light, B., 375.

Orcel, J., and Pavlovitsch, S., microscopio characteristics of the oxides of manganese and of the natural manganites, A.,

Orcel, J., and Plaza, G. R., microscopical study of the complex cuproargentiferous minerals of Colquijirca (Peru), A., 288. Orden, S. L. van. See Clark, G. L.

Orelkin, B. See Tschngaev, L.
Orelup, J. W., Lee, O. I., and Boyce-Ite Products, Inc., fuel and fuel ingredients, (P.), B., 234.

Orem, W. H. Sco Genese, D. Orent, E. R., blood-sugar, A., 207.

Orioli, E. See Ruth-Aldo Co., Inc.

Orito, I., sterio hindrance in Hoesch reaction, A., 929.

Orkla Grube-aktiebolag. Seo Lenander, N. E.

Orlandi, C. See Fernandes, L.

Orlandi, U., extraction of phosphorus pentoxide, B., 205.

Orlov, E., treatment of phosphorites with a low phosphoric acid

content, (P.), B., 556.

Orlov, E. I., preparation of salts of naphthylsulphuric acid with aromatic organic bases, and their application to the dyeing of silk and wool by diazotisation on the fibre, B., 426.

carbamate-carbonate theory of the ammonia-soda process, B., 679.

Orlov, J., determination of the oil content of linseed by the results of mechanical analysis of the purity, B., 27.

Orlov, N. A., pyrogenic dissociation of condensed ring systems, Á., 307.

pyrogenic dissociation of some condensed ring systems, A., 549.

synthetic crude oil from cholesterol and from Lycopodium

Orlov, N. A., and Belopolsky, M. A., pyrogenic decomposition of the perhydrides of fluorene and acenaphthene under pressure of hydrogen, A., 803.

formation of coumarone in coal tar, B., 806.

Orlov, N. A., and Lichatschev, N. D., pyrogenic decomposition of chrysene under pressure of hydrogen, A., 549, 803.

Orlov, N. A. See also Ipatiev, V. N. Orlov, P. P., changes in the crystalline form of sodium nitrate in accordance with the composition of the solution from which it

separates, A., 494.
Orlov, V. N. See Tronov, B. V.
Ormandy, W. R., fuels—alternative or supplementary to petrol for use in internal-combustion engines for road vehicles. I. Liquid fuels, B., 231

manufacture of nitric acid, (P.), B., 321.

recovery of acetone from gases, (P.), B., 467. Ormandy, W. R., Craig, T. J. I., and Spence & Sons, Ltd., P., preparation of moisture-absorbing material, (P.), B., 557. Ormandy, W. R., and Craven, E. C., action of sulphuric acid on

olefines, etc., B., 462.

Ormont, B., gravimetric titrations and their application to microchemical determinations, A., 41, 1029\*.

Ormont, Bernard, and Keystone Chemical & Manufacturing Co., recovering volatile metals [mercury from rubber wasto], (P.), B., 904.

Ormont, Bernard, and Ormont Associates, Inc., B., production of gasoline and other light hydrocarbons from heavier hydrocarbons, (P.), B., 198.

Ormont Associates, Inc., B. See Ormont, Bernard.
Orndorff, W. R., and Willard, M. L., hydroxyquinolsulphone-phthalein (2:7-dihydroxysulphonefluorescein); 2:4:5-trihydroxybenzoylbenzene-o-sulphonic acid and derivatives, A., 822. Ornstein, G., treatment of water or sowage, (P.), B., 228.

production of hypochlorites, (P.), B., 517.

Ornstein, L. S., Burger, H. C., and Kapuscinski, W., generation of the helium spectrum by electrical excitation, A., 4.

Ornstein, L. S., and Rekveld, J., proof of the Maxwell-Boltzmann

law by intensity measurements of the Raman effect for carbon tetrachloride, A., 1362

intensity measurements in the Raman effect and the distribution law of Maxwell and Boltzmann, A., 1215.

Orr, J. H. See Reed, G. B. Orr, M. D. Sco Hershey, J. M.

Orr, T. G., and Haden, R. L., chemical changes in dog's blood in experimental peritonitis, A., 210. Orr, T. G. See also Haden, R. L.

Orrà, A., colour reaction of adrenaline, A., 1093.

Orskov, S. L. See Widmark, E. M. P. Ort, J. M., ultra-violet light, insulin, and amino-acid catalysis, A., 889.

Ort, J. M., and France, W. G., membrane potentials, A., 1241. Orthmann, A. C., and Arner, W. J., determination of the cold test of [animal or vegetable] oils, B., 137.

Orthmann, IV., change in resonance lines through multiple Compton effect, A., 734.

Orthmann, W., and Pringsheim, P., breadth of resonance lines and possibility of their displacement towards the red by repeated scattering, A., 615.

Orthner, L. See Goldschmidt, S. Ortmann, K., separation of the powder from granular or like material, (P.), B., 626.

Ortner, G., and Stetter, G., electrical detection of single corpuscular rays, A., 737. Orton, K. J. P.

See Bradfield, A. E.

Os, D. van, and Wal, Y. van der, sham cola nuts, B., 101.

Osaka, H., cryoscopic studies of the transition points of compounds of organic solvents with salts. I., A., 141.

Osawa, A., intermetallic compound having a simple cubic lattice, A., 987. X-ray investigation of palladium-silver-hydrogen alloy. I.,

A., 1374. Osawa, A., and Iwaizumi, S., X-ray investigation of iron-nitrogen

alloys, A., 986.

X-ray study of iron-nitrogen compounds, A., 1220. Osawa, A., and Ogawa, Y., X-ray investigation of iron and zinc alloys, A., 1130.

Osawa, A. See also Honda, Kôtarô, and Oya, S.

Osborn, R. T., and Standard Oil Co. of California, recovery of vapours [waste petroleum gases], (P.), B., 10.

Osborne, F., and Semet-Solvay Co., recovery of ammonia [from gas], (P.), B., 465.

Osborne, F. Sec also Barrett Co. Oscbatz, F. See Hüttig, G. F.

Oser, B. L., intestinal  $p_{\rm H}$  in experimental rickets, A., 210.

Osgood, G. H., waterproofing vegetable protein-base glue, (P.), B., 615.

Oshima, F. See Schönheimer, R. Oshima, K., disinfectants for preserving the amylase solution of Aspergillus oryzæ, A., 356.

proventing the blackening of tinned foods, (P.), B., 35. Oshima, Z. See Spiegel-Adolf, M.

Osman, A. A. See Close, H. G.

Osol, A. See Horn, D. W. Osser, S., rapid magnetising and demagnetising metal alloys, (P.), B., 60.

Ossowski, A., origin of essential oils, balsams, and resins, A., 1499. Osswald, P. See I. G. Farbenind. A.-G. Osterhout, W. J. V., penetration of electrolytes, A., 1378. Osterhout, W. J. V., and Harris, E. S., concentration effect in

Nitella, A., 1112. Osterhout, W. J. V. See also Cooper, W. C., jun.

Osterlund, A. H., antifreezing composition, (P.), B., 452.

Ostermann, W., and Industrial Spray Drying Corporation, comminuting solid substances, (P.), B., 665\*.

Osterstrom, R. C., and Wagner, C. R., heat treatment of hydrocarbon oils, (P.), B., 883.

Ostertag, J., removal of easily-soluble salts from boiler feed water, (P.), B., 190\*.

purification system for boilers, (P.), B., 190\*.

clearing and purifying water for steam boilers of all kinds, (P.), B., 190\*.

Osthoff, W., process and device for burning heavy oils, (P.), B.,

162.

singeing of textile goods, (P.), B., 429. Ostman, N. See Gerlach, O.

Ostrogovich, A., and Bena Median, V., new aryliminoketo-y-[1:3:5]-triazidine derivatives, A., 827.

Ostromislensky, I., and Naugatuck Chemical Co., production of purified styrene, (P.), B., 467.

manufacture of coloured polymerised styreno and its homo-

logues, (P.), B., 746.

Ostromislensky, I., and Pyridium Corporation, manufacture of arylazodiaminopyridines useful as bactericides, (P.), B.,

manufacture of pyridines, (P.), B., 958.

Ostromislensky, I., and Revere Rubber Co., vulcanisation of rubber, (P.), B., 566.
Ostwald, W., peptisation of dyes by neutral salts, A., 762.
Ostwald, Walter, theory of emulsions, A., 260.
Ostwald, Wolfgang, jelies and gels, A., 137.

mathematical representation of the structure region of viscosity,

general solvation equation for colloid systems, A., 1234. solid-phase rule in the production of protein sols, A., 1380. Ostwald, Wolfgang, and Buzágh, A. von, chemical composition

and dispersity of crystalline particles, A., 642.

Ostwald, Wolfgang, and Haller, W., lyosorption, A., 1377. Ostwald, Wolfgang, and Hertel, R. H., colloidal chemical reactions between sols of albumins and polymerised carbohydrates.

I., A., 507. colloidal chemical reactions between sols of proteins and polymeric carbohydrates. II., A., 647.

Ostwald, Wolfgang, and Kestenbaum, P. P., solid phase relations in swelling, A., 880.

Ostwald, Wolfgang, and Quast, A., changes in physico-chemical properties in the region between colloid and molecular disperse solutions. I., A., 760.

change of physico-chemical properties in the region between colloid and molecular disperse systems. II., A., 878.

Ostwald, U. See Schönberg, A.

Oswald, L., and Geigy Société Anonyme, J. R., manufacture of

azo-dyes, (P.), B., 468\*.
Ota, Y., and Uchida, Y., emission band spectrum of chlorine,

A., 118.
Ota, Y. See also Uchida, Y., and Ueno, S.
Otani, K., influence of insulin on glycogen formation in macerated liver or muscle and in the liver during perfusion with sugarsaline solutions, A., 1495.

Othman-Neuscheller, J. See Ohle, H.

Othmer, D. F., heavy-duty thermostat, A., 672. large-capacity laboratory condensers, A., 1034.

manometer for determination of gases in vapours, B., 267. condensation of steam, B., 663.

all-glass evaporator, B., 837,

Otis, A. N. See Gen. Electric Co. Otsuka, K. See Honda, Kanji.

Ott, A., preparation of products with a high benzene content from those with a low content, (P.), B., 669.

Ott, E., X-ray examination of highly-polymerised organic substances, A., 746.

decomposition of carbon monoxide in the silent electric discharge, A., 1401.

[isomerism of diphenylmethylpyrazoles], A., 1464.

gas analysis, B., 999. Ottaviano, I. See Minunni, G.

Otten, R. See Rheinboldt, H. Ottens, B. See Auwers, K. von.

Otterbacher, T., and Whitmore, F. C., phonyl- and o-tolylthiocarbimides as reagents for primary aromatic amines, A., 922.

Ottmann, IV., impregnating brake bands, brake coverings, etc., (P.), B., 80. Otto, B. See Sherrill, M. L.

Otto, C., vertical-chamber coke oven, (P.), B., 199\*.

coke oven, (P.), B., 272.

regenerative coke oven, (P.), B., 464.

direct production of ammonia, (P.), B., 706.

Otto, Carl, acetone and acetoacetic acid in urine, A., 716. Otto, G., concentration of lichenase and cellulase. V. Enzymes of barley malt, B., 734.

Otto, J. See Hense, W. Otto, K. V. See Glund, W.

Otto, M. See Hofmann, F.

"Otto Pressler" Thüringer Vakuumröhrenfabr. & Fabr. wiss. Apparate. See Pressler, E. G. O. Oughtred, C. T., flotation practice at the Sullivan mill, B., 602.

Overhoff, J., and Tilman, G., action of benzoyl peroxide on pyridine, A., 1313.

Overman, O. R., Sanmann, F. P., and Wright, K. E., composition of milk, B., 1029.

Overmire, C. A., and Western Gold & Platinum Works, hightemperature costing compound, (P.), B., 780.

Overstraeten, C. van, purification of industrial [wool-]washing water and the like, (P.), B., 540.

Overwien, E. See Goldschmidt, H. Ovrebo, P. J., platinum term values and classification, A., 1352. Ovtschinnikov, A., manufacture and packing of matches, (P.), B., 798.

manufacture [dipping] of matches, (P.), B., 912.

Owe, A. W., production of vitamin preparations, (P.), B., 650\*. Owen, A. F. See Mechanical Rubber Co.

Owen, B. J., and Sugar Beet & Crop Driers, Ltd., dehydration of vegetable substances [e.g., sugar-beet slices] of organio character, (P.), B., 573\*.

Owen, E., liquid-phase cracking processes, B., 7.

choice of cracking process [for petroleum oils], B., 117. Owen, G. E., dielectric losses at high frequencies, B., 1020.

Owen, O., occurrence of chlorates in a tomato soil, A., 962. analysis of tomato plants. I., B., 732.

Owen, R. E., physical development and nature of the latent image, B., 623.

Owen, R. J. See Holmes, A. D. Owen, W. H., heat exchangers, (P.), B., 625. Owen, W. H. See also Carrier Engineering Co., Ltd.

Owens, W. M. See Heilbron, I. M.

Oxford Varnish Corporation, imitating marble and other surfaces, (P.), B., 248.

Oxhydrique Franc., production of hydrogen, (P.), B., 814.

Oxley, H. F. See Brit. Celanese, Ltd. Oxnard, E. P. See Francis, A. W.

Oxweld Acetylene Co. Sco Becket, F. M.

Oya, S., equilibrium diagram of the iron-vanadium system, A.,

Oya, S., and Osawa, A., vanadium-carbon system, A., 1369. Oya, T. See Pincussen, L.

Oyama, K., origin of the alkaline reaction in the intestinal juice, A., 592.

P.

Paal, C., and Schiedewitz, H., differing behaviour of a- and β-chlorobutyric acids during catalytic hydrogenation, A., 1270. Paal, H., fission of lecithins, A., 1337.

Paar, IV. See Spengler, O.

Paasch, G., and Reinwein, H., tissue respiration. V. Effect of thyroxine, adrenaline, and insulin on the oxygen uptake of the surviving rat's diaphragm, A., 1343.

Pabst, A., X-ray examination of the system Au-Hg, A., 987. X-ray study of the formation of zinc silicates, A., 996.

Pabst, A. See also Broch, E.

Pabst, F., derivatives of cyanomalonic acid, A., 918. Pabst, H. See Brand, K. Pace, E., pinacols and pinacolins, A., 538.

condensation of piperonaldehyde with certain pinacolins, A.,

action of carbonyl chloride on ethylenic linkings. I. Hydrocarbons and alcohols, A., 1419.

Pacific Abrasive Supply Co. See Morin, W. T.

Pacific Coast Borax Co. See Cramer, T. M. Pacific Lumber Co. See Leaver, J. M.

Pacific R. & H. Chemical Corporation. See Brown, M. JPacific-Southwest Trust & Savings Bank. See Curtis, T. S.

Pacukov, N. G., laboratory methods of testing the ash of solid fuels with regard to its chemical activity towards refractories, B., 41.

Paoukov, N. G. Sco also Nefedieva, O. V.

Pacsu, E. See Hudson, C. S., and Zemplén, G.

Pacz, A., refining of metals [silver] and alloys, (P.), B., 100. coating and colouring of metals, (P.), B., 215, 823\*. surface-treatment [colouring] of aluminium articles, (P.), B.,

[aluminium-copper] alloys, (P.), B., 923. Paddon, W. W., adsorption of certain acids by wool, A., 1001.

Padelt, E. See Bodenstein, M.

Paderewski, J., apparatus for mechanical analysis of soils, B.,

differential apparatus for measuring the volume of soils, B.,

Padoa, M., and Vita, N., yield in photochemical reactions in [rapidly] intermittent light, A., 154.

photochemical yield in the chlorophyll assimilation [of carbon dioxide] with complex and intermittent lights, A., 155. action of carbon monoxide on green plants, B., 487.

Padovani, C., and Burrai, J., formation and origin of acetic acid and of other volatile organic components of pyroligneous liquor, B., 309.

Padovani, C., and Salmoiraghi, E., recovery of the soda lyes from the industrial delignification of Tripoli esparto, B., 279.

Päfigen, J., removing caffeine and unsavoury substances from roasted coffee, (P.), B., 956.

Paersch, E. See Herzog, R. O.

Paffrath, H. See Burghard, E.

Page, A. R., heat treatment of high-tensile aluminium alloys, B., 779.

Page, A. W. See Page, R. O.

Page, H., distribution of ingredients in rubber mixings, B., 611.

Page, I. H. See Baumgartner, L.

Page, L., motion of ions in constant fields, A., 619.

conductivity of ions in crossed electric and magnetic fields, A., 1211.

Page, R. O., determination and nature of water-soluble [matter] in leather tanned with wattle bark extract, B., 66.

Page, R. O., and Page, A. W., influence of hydrogen-ion concentration on the colour of vegetable-tanned leather, B., 613. Pagel, H. A., and Brinton, P. H. M.-P., higher oxides of some

rare-earth elements, A., 280.

Paget, M., and Lohéae, P., determination of adrenaline in human

adrenals after death, A., 462.

Paget, M. See also Langeron. Painvin, A. See Maignon, F.

Pak, C., and Read, B. E., comparative study of ephedrine, racemic ephedrine, and  $\psi$ -ephedrine, A., 97.

comparative study of ephedrine,  $\tau$ -ephedrine, and  $\psi$ -ephedrine. II. Comparative toxicity, A., 349.

Pak, C. See also King, T.

Pakschwer, S. See Trautz, M.

Pal, P. P. See Sen, H. K.

Palache, C., paragenetic classification of the minerals of Franklin, New Jersey, A., 673.

phosphorescence and fluorescence of Franklin minerals, A., 673. seligmanite from Bingham, Utah, A., 673.

Palache, C., Bauer, L. H., and Berman, H., larsenite, calciumlarsenite, and associated minerals at Franklin, N.J., A., 787.

Palache, C., and Ellsworth, H. V., zircon from North Burgess, Ont., A., 787.

Palache, C., and Shannon, E. V., beryllonite and other phosphates from Newry, Maine, A., 673.

Palacios, J. See Seherrer, P. Paley, S. S., liquid preparation for sanitary purposes, eliminating the smell, and decomposition of offensive matter, (P.), B., 962.

Palfray, L., and Rothstein, B., cyclohexanediols. I. cis- and trans-Quinitols; separation and properties, A., 60. esters of cyclohexane-1:4- and -1:3-diols (quinitol and resorcitol), A., 1064.

halogen derivatives of cyclohexane-1:4-diol, A., 1441.

Palit, C. C., and Dhar, N. R., oxidation of fats, nitrogenous substances, and their mixtures with carbohydrates by air, and

metabolism in normal health and diabetes, A., 48.

Palitzsch, S., surface tension of solutions. I. Influence of salts on surface tension of aqueous solutions of urethane; the determinations. II. Calculation of surface tension from the drop-weight. III. Influence of salts on surface tension of aqueous solutions of urethane; discussion of results, A., 257. Palkin, A. P. See Karavaev, N. L.

Palkin, S., and Watkins, H. R., purification and preservation of

ether for anæsthetic use, B., 956.

Palladin, A., and Epelbaum, S., creatine-phosphoric acid content of white and red muscle in experimental scurvy and polyneuritis, A., 345.

influence of hunger on the creatine content of muscle and on the creatine and creatinine excretion of cats, A., 345.

Palladin, A., Kudrjavzeva, A., and Savron, E., creatine-phosphoric acid of muscle, A., 93.

Pallemaerts, F. A. F., synthetic ammonia plant at Ostend, B., 169.

Pallot, G. See Cotte, G.

Palm, A. See I. G. Farbenind. A.-G.
Palm, J. V. O., and Cleveland Graphite Bronze Co., alloy and its manufacture, (P.), B., 439.

Palma, S. See Covello, M.

Palmaer, W. [with Griep, O. E., Hannerz, B., Ohlsson, S., Persson, O., Styrud, S., Sundberg, H., Ullstrand, B., and Wilner, T.], corrosion of metals. I. General theory, B., 921. Palmén, J., pinacolin rearrangement of dicyclic ditertiary glycols,

A., 192.

Palmer, Charles Shattuck, and Kester, E. B., unsymmetrical arseno-compounds from p-arsinoanilinoethyl alcohol and parsinoanilinoacetamide, A., 82.

Palmer, Charles Skeele, manufacture of by-products from inactive

and inert oils or gases, (P.), B., 386.

Palmer, C. W., Whitehead, W., and Celanese Corporation of America, manufacture of artificial silk and like threads, (P.), B., 976\*.

Palmer, L. A., cause and prevention of kiln and dry-house scum and of efflorescence on face-brick walls, B., 20.

vanadium and molybdenum compounds in clays, B., 208. some absorption properties of clay bricks, B., 919.

Palmer, L. S., alleged presence of carotin in pig's liver, A., 463. Palmer, L. S., Eckles, C. H., amd Schuttl, D. J., magnesium sulphate as a factor in retention of calcium and phosphorus in cattle, A., 1485.

Palmer, L. S. See also Kennedy, C., and Richardson, G. A. Palmer, W. G., adsorption isothermals for a plane platinum surface, A., 502.

Palmer, W. L., and Regan Forge & Engineering Co., apparatus

for dehydrating crude [petroleum] oils, (P.), B., 744.

Palmer, W. W., Carson, D. A., and Sloan, L. W., influence of iodine on the excretion of creatine in exophthalmic goitre, A., 954.

Paloheimo, L., determination of lignin by acid hydrolysis, A., 1498.

Pam, B. M., effect of thinners on the viscosity of nitrocellulose solutions, B., 1010.

Pamfilov, A. V. [with Dunaeva, O. K., Filippyčev, F. G., Ivančeva, (Miss) E. G., and Troizkaja, A. A.], determination of lead peroxide, B., 850.

Pamfilov, A. V., and Fedorova, O. S., formation of perchlorate during electrolytic preparation of chlorate. II., A., 1151. Pan American Petroleum Co. See Black, J. C., and Rial, W. D.

Panebianco, R., numerical approximations neglected in both chemistry and physics, A., 1218.

Paneth, F., physical methods in the chemical laboratory. IX. Use of radio-elements as indicators, A., 528.

Paneth, F., and Hofeditz, W., preparation of free methyl, A., 788. Paneth, F., and Peters, K., helium. III. Behaviour of helium towards glass and palladium, and the question of helium compounds, A., 25.

Paneth, F., Petersen, K. IV., and Chloupek, J., helium. VI. Helium content of "moldavites" and artificial glasses, A., 660. Panteleimonov, B. G., extraction of bromine by solvent.

extraction of bromine and iodine by solvents. III. Iodine, B., 812.

preparation of basic magnesia, B., 1043.

Pantenburg, V., recovery of gases and vapours from gas mixtures, (P.), B., 500.

Pantin, B. See Nicholson, H. H.

Pantke, R. See Dreyspring, C.

Pantschenko, G. A. See Tananaev, N. A.

Pantschenko, S. J. See Krym, V. S.
Paoloni, C. See Carughi, A.
Papadakis, P., invertase from honey, A., 1337.
Papadakis, P. See also Nelson, J. M.
Papaioanou, G. See Späth, E.

Pape, P., rotating filter drum without cells, (P.), B., 116.

Paper Mill Laboratories, Inc. See Wells, S. D.

Papish, J., occurrence of germanium in topaz, A., 788.

Papish, J. See also Wright, N. C.
Papkov, V. V. See Malyarevski, V. I.
Paramasivan, S., anomalous diamagnetism of graphite, A., 1223. Paranipe, D. R., and Ayyar, P. R., oil from seeds of Sapindus trifoliatus, Linn. [soapnut tree], B., 987.

Paranjpe, D. R. See also Godbole, S. N.

Paranipe, G. R., and Sheshadriengar, K., new type of low-frequency low-voltage discharge in a neon lamp, A., 112.

Paranjpe, G. R. See also Boohariwalla, D.

Paras, E. M. See Cruz, M. C.

Pare Engineering Co., Ltd. See Player, E. Parchet, L. See Duboux, M. Parchin, A. N. See Engelhardt, W. A.

Parentani, F., purification of clay and similar materials, (P.), B., 919.

Parfianovitsch, L. See Arzybyschev, S.

Parijs, A. H., reactivity of the nitro-group in 4:5-dinitroveratrole towards sodium methoxide at 35° and 45°, A., 806.

displacement of the aldehyde group in piperonal and its derivatives, A., 1450.

Paris, H. P., handling, mixing, and pouring concrete, (P.), B., 357.

Parisi, E. [with Bernardi, B., and De Meichsner, F.], alcoholic fermentation of amino-acids, A., 957.

Park, J. G. See Wheeler, A. S. Park, O. W., nectar in relation to honey production, A., 612.

Parke, R. M. See Baker, E. M.

Parke, Davis & Co., manufacture of gelatin capsules for bottle caps, (P.), B., 830.

Parke, Davis & Co. Sec also Anderson, C. N., Dox, A. W., and Ferry, N. S.

Parker, A., apparatus for separating grit, dust, etc., from smoke and gases, (P.), B., 500. Parker, A. J., and Spackman, L. S., relations between acidity and

freezing point of milk, B., 414.

Parker, C. H., apparatus for the distillation of coal and similar

carbonaceous substances, (P.), B., 10\*.

Parker, C. H. See also Low Temperature Carbonisation, Ltd. Parker, G. H., carbon dioxide from the unsevered vagus of the

snake, A., 345. Parker, H. See Brown, O. B.

Parker, H. C., electrochemical treatment of saline and alkaline solutions, (P.), B., 859.

Parker, H. H. See Gilman, H., and McKee, R. H.

Parker, J. See Chem. Engineering & Wilton's Patent Furnace Co., Ltd.

Parker, J. G., extraction of solid tanning materials by the Koch and Procter apparatus under identical condition, B., 139. Darmstadt apparatus for tannin analysis, B., 140.

tannin analysis: report of Committee of Society of Leather Trades' Chemists, B., 1024.

Parker, J. S., and Southwell, C. A. P., Trinidad well waters, A., 904.

Parker, R. B., retort construction, (P.), B., 115.

apparatus for extraction of volatile constituents from carbonaccous materials, (P.), B., 423.

Parker, R. G. See Brit. Launderers Res. Assoc.

Parker, T. W., and Robinson, P. L., reactions of hydrogen chloride with the dioxides of selenium and tellurium between 0° and 170°, A., 40.

determination of available oxygen by the Bunsen method, A.,

Parker, W., normalising of sheet steel, B., 647.

Parkes, D. W. See Robinson, Herbert W.
Parkes, G. D. See Chattaway, F. D.
Parkes, L. R., colloidal mordant bath and its manufacture, (P.), B., 716.

Parkin, M. See Green, (Mrs.) G. A. Parkinson, T., dye beeks and like apparatus for liquid treatment of textile yarns or fabrics, (P.), B., 205.

dyo baths, (P.), B., 938.

Parkinson, T., and O'Loughlin, J. A., baths or vats for use in dycing, soaping, washing, and other finishing operations [for fabrics], (P.), B., 640.

Parks, G. S., and Gilkey, W. A., glass. IV. Viscosity data for liquid dextrose and dextrose-glycerol solutions, A., 1228.

Parks, G. S., Kelley, K. K., and Huffman, H. M., thermal data on organic compounds. V. Revision of the entropies and free energies of nineteen organic compounds, A., 990.

Parks, G. S. See also Cattoir, F. R.

Parlin, W. A., effect of temperature on the absorption bands of fused quartz in the infra-red, A., 974.

Parmelee, A. E. Sec Du Pont de Nemours & Co., E. I. Parmelee, C. E., clay sewer-pipe manufacture, VIII. Measurement of draught distribution, B., 644.

Parmelee, C. W., and Rudd, R. D., torsional apparatus for measur-

ing plasticity [of clays], B., 941.

Parmelee, C. W., and Westman, A. E. R., effect of thermal shock on the transverse strength of fireclay brick, B., 356.

Parmelee, C. W. See also Fetterolf, L. D.

Parnaby, J. J. See Canning Town Glass Works, Ltd.

Parnas, J. K., ammonia formation in muscle and its relationship to function and change of condition. VI. Relation of ammonia formation to conversion of adenine nucleotide into inosic acid, A., 598.

purine metabolism of muscle, and the parent substance of

muscle-ammonia, A., 718.

connexion between oxidative and anoxidative deamination and the rôle of aminopurines in intermediate tissue metabolism, A., 1484.

Paroulek, rôle of the liver in the metabolism of purine substances, A., 1334.

Parr, S. IV., classification of coal, B., 270.

low-temperature carbonisation of eoal, B., 309.

Parr, S. W. See also Urbana Coke Corp.

Parravano, N., leucite industry from the chemico-physical point of view, B., 15.

Parravano, N., and Malquori, G., thermal decomposition of aluminium oxide, hydroxide, and nitrate, A., 157.

Parrish, W. C., and Texas Co., apparatus for controlling cracking stills, (P.), B., 46.

Parrock, H. P., manufacture of alloy pig iron, (P.), B., 754. Parsons, A. T., radium, with special reference to luminous paint,

B., 254. Parsons, (Sir) C., and Duncan, H. M., new method for produc-

tion of sound steel, B., 435. Parsons, C. S., selective flotation as applied to Canadian ores, B., 132.

Parsons, C. S., Anderson, A. K., and Godard, J. S., reports of investigations: [Canadian] ore-dressing and metallurgical laboratories, B., 819.

Parsons, C. S., Carnochan, R. K., and Godard, J. S., reports of investigations: [Canadian] ore-dressing and metallurgical laboratories, B., 132.

Parsons, J. A., jun., and Duriron Co., Inc., [silicon-]iron alloy, (P.), B., 900.

Parsons, L. B., Drake, E. T., and Sturges, W. S., bacteriological conductivity culture cell and some of its applications, A., 354. Partington, J. R., and Soper, W. E., heats of dissolution of some salts in water and ethyl alcohol solutions, A., 511.

Partington, J. R., and Tipler, A. F., potassium hexathionate,

Partington, J. R. See also Husain, S., Isaacs, G. F., Mitchell, V. E. S., and Shilling,  $W. \overline{G}$ .

Partos, A., regulation of carbohydrate metabolism; renal excretion of insulin, A., 1343.

Partridge, E. G. See Phipps, T. E.

Partridge, E. M., chemical proportioning of internal water feed treatment, B., 874.

Partridge, E. M. See also Friend, R. O. Partridge, E. P., present trends in dust recovery, B., 542. metallic materials of construction for chemical engineering equipment, B., 559.

industrial measurements. I. Weighing, B., 761.

Partridge, E. P., and White, A. H., solubility of calcium sulphate from 0° to 200°, A., 388. mechanism of formation of calcium sulphate boiler scale, B., 874. thermal effects of boiler scale, B., 874.

Partridge, E. P. See also Ramsdell, L. S.

Partridge, H. E., apparatus for dyeing, washing, or bleaching, (P.), B., 679.

Partridge, H. M., vacuum tube potentiometer for rapid E.M.F. measurements, A., 288.

Partridge, W., extractives of brandy, B., 337.

Parville & Cie., E., electric accumulators, (P.), B., 824.

Pascal, P., and Leculr, R., complexes derived from triazinetricarboxylic acid, A., 1083.

Paschen, F., first spark spectrum of mercury, Hg II, A., 365. Paschke, M., and Schiegries, E., bonding of fine ores, burnt pyrites, etc., with liquid slags, (P.), B., 249.

Pascoe, T. A. See Gregory, R.

Pascual, isomerism of styryl methyl ketones, A., 69.

Passburg, E. See Griffiths, H.

Passelecq, G. H., concentrating apparatus [for solutions], (P.), B., 580.

Passerini, L., crystal structure of phosphides of bivalent and tervalent metals, A., 125.

X-ray analysis of cadmium arsenide and arsenious anhydride, A., 246.

solid solutions, isomorphism, and symmorphism among the oxides of bivalent metals. II. The systems CoO-NiO, CoO-MgO, CoO-MnO, CoO-CdO, NiO-MgO, NiO-MnO, and NiO-CdO, A., 639.

spinels, A., 673. Passerini, L. See also Natta, G.

Passerini, M., carbylamines, A., 178. Passerini, M., and Banti, G., influence of certain substituent groups in the aniline molecule on the formation of carbylamines, A., 180.

Passerini, M., and Macentelli, M. P., action of acotic anhydride on Schiff's bases, A., 187.

Passl, J. See Spath,  $\dot{E}$ . Pastak, I., constitution of aromatic substances and their chemical and physical properties. VI. Crystalline symmetry, A., 497.

Pasternack, R., and Pfizer & Co., O., preparation of cinchophen [2-phenylcinchoninic acid], (P.), B., 150.

Pastore, F. See Ducloux, E. H. Pastorello, S., iron, cobalt, nickel, and copper as deflexion lattices for the corresponding X-rays, A., 984.

Pasvik, M. A. See Chlopin, V. G.
Patart, G., and Nielsen, H., decomposition of calcium carbonate and manufacture of calcium carbide, (P.), B., 718.

Patart, G. L. E., recovery of heat and water vapour in gaseous reactions, (P.), B., 323\*

Patat, F. See Klemenc, A.
Patel, C. K. See Scholefield, F.
Patel, J. S. See Wiesner, B. P.

Patent Gear Hardening Co., Ltd. See Shorter, A. E.

Patentaktiebolaget Gröndal-Ramén, dry distillation of shales, brown coal, etc., (P.), B., 44.

Patent-Treuhand Gesellschaft für elektrische Glühlampen m.b.H., Mohr, R., and Becker, H., ceramic product moulded by casting in a hot state, (P.), B., 645.

Patent-Treuhand Gesellschaft für elektrische Glühlampen m.b.H. See also Gen. Electric Co., Ltd., and Pirani, M.

Paterson, D. S. See Nat. Acme Co.

Paterson, J. H. See Imperial Chem. Industries, Ltd.

Paterson, R. S., preparation of tannlo acid compositions, (P.), B., 189.

Paterson, W., apparatus for testing the chlorine content of water, (P.), B., 700.

Patey, A., and Holmes, B. E., production of ammonia by surviving kidney-tissue, A., 1194.

Paton, R. F., and Rassweiler, G. M., furnace spectrum of beryllium, A., 226.

vacuum spark spectrum of aluminium, A., 1206.

Patrick, J. C., and Mnookin, N. M., manufacture of plastic substances, (P.), B., 826.

Patrick, W. A., and Silica Gel Corporation, catalytic agent and its manufacture, (P.), B., 557.

catalytic and absorbent gel, (P.), B., 642. Patrick, W. A., Barclay, E. H., and Silica Gel Corporation, preparation of tungsten oxide gel, (P.), B., 17.

Patrouilleau, L. G., and Soc. Alumine & Derives, manufacture of aluminium sulphate, (P.), B., 17, 55\* manufacture of aluminous cements, (P.), B., 56\*.

Pattabhiramayya, P., spectrum of trebly-ionised thallium (Tl IV),

Pattabhiramayya, P., and Rao, A. S., series in the As VI spectrum, A., 479.

spectra of As III and Sb III, A., 733. series spectrum of Se IV, A., 966.

Pattee, G. L., and Nelson, E. E., biological assay of ergot preparations, A., 845.

Patten, C. G., and Smith, N. D., action of light and X-rays on ammonium thiocyanate, A., 407.

Patten, C. G. See also Shrum, G. M.

Patterson, A. L., measurement of the size of crystal particles by X-rays, A., 15.

Patterson, A. M., nomenclature of parent ring systems, A., 53. nomenclature of organic compounds of complex function, A., 1170.

Patterson, C. J., Harrel, C. G., and Bakeries Service Corporation,

bread-making, (P.), B., 868.
Patterson, H. S., Whytlaw-Gray, R., and Cawood, W., structure and electrification of smoke particles, A., 1004. process of coagulation in smokes, A., 1006.

Patterson, P. D. See Dunlop Rubber Co., Ltd.

Patterson, R. C. See Vandervell & Co., Ltd., C. A.

Patterson, T. S., and Buchanan, C., influence of solvents on rotation of optically active compounds. XXVI. Optical activity of malic acid in presence of sodium molybdate, A., 122.

Patterson, T. S., and Lawson, A., influence of solvents and other factors on the rotation and rotation-dispersion of optically active compounds. XXVII. Derivatives of lactic acid, A., 1218.

Patterson, T. S., and Robertson, J., preparation of  $\alpha$ - and  $\beta$ -methyl-

glucoside, A., 429.

Patterson, T. S., and Thomson, G., polarimetric study of intramolecular re-arrangement in inactive substances. VII., A.,

Patterson, T. S., and Todd, A. R., action of phosphorus pentachloride on ethyl tartrate, A., 1166.

Patteson, M. B., and California Fruit Growers' Exchange, agent for control of pests injurious to vegetation, (P.), B., 866\*. Pattison, M. R., steam purifiers and like apparatus for separating

impurities from fluids, (P.), B., 191.
Patwardhan, V. N., and Norris, R. V., enzyme action.

Amylase from Cholam (Sorghum vulgare), A., 216. Paul, and Grandseigne, extraction and utilisation of pectase, B.,

Paul, A.J., and Holmes, M.E., effect of various addition agents

and treatments on the green strength of Missouri refractory clays, B., 979.

Paul, I. M., and Metal & Thermit Corporation, recovering van-adium [from ores], (P.), B., 215. Paul, James R., antifreeze composition, (P.), B., 501.

Paul, John R. See Wright, S. L., jun.

Paul, M. See Hugel, G.

Paul, R., synthesis of α-dimethoxypentan-β-one, A., 542. Pauli, W., electrolyte-free water-soluble proteins. VII. Hydration

and sign of charge of the ions of proteins, A., 264. Pauli, W., and Stenzinger, T., influence of proteins on the solu-

bility of sparingly soluble calcium salts; the carbonic acid compounds of proteins, A., 394.

Pauli, W., and Weiss, Ernst, reactions between colloids. I. Dyes and proteins, A., 395.

Pauli, W. See also Ito, T. Pauling, H., combustion of ammonia, (P.), B., 776\*.

Pauling, L., size of ions and its influence on the properties of saltlike compounds, A., 122.

principles determining the structure of complex ionic crystals,

change [of crystal structure] of rubidium halides by pressure A., 1222.

Pauling, L., crystal structure of the chlorides of certain bivalent elements, A., 1221.

crystal structure of the A-modification of sesquioxides of the rare-carth metals, A., 1223.

photo-ionisation in liquids and crystals and the dependence of the frequency of X-ray absorption edges on chemical constitution, A., 1355.

molecular structure of the silicotungstates and related compounds, A., 1367.

Pauling, L. See also Ewing, F. J., Podolsky, B., and Sturdivant, J. H.

Paull, W. H. See Dunlop Rubber Co., Ltd.

Paulley, W. M. See Henville, D.

Pauly, H., and Feuerstein, K., hadromal, lignin, and coniferaldehyde; preparation and identification; higher alkali condensates of acetaldehyde, A., 446.

Pauly, H., and Ludwig, E., identification and separation of organic bases with the aid of glyoxalinedicarboxylic acid, A., 579.

Pauly, H., and Strassberger, L., synthesis of syringin, A., 1299.

Pauthenier, M. See Bruhat, B.

Pavarino, G. L., changes produced in eggs by micro-organisms,

Pavelka, F., sensitive spot reaction for fluoride, A., 162.

Pavitt, W. H., and Wilputte Coke Oven Corporation, still construction, (P.), B., 913.

Pavitt, W. H. See also Wilputte, L.

Pavlas, P. See Staněk, V.

Pavlenko, M., and Nazarov, P., evaluation of the quality of fillers in rubber manufacture, B., 138,

Pavlov, M., gas absorption during electric discharges, A., 1402. Pavlov, V., and Sueva, (Frl.) N., method for determination of critical potentials and its application to mercury vapour, A., 735.

Pavlov, V. See also Dobronravov, N. Pavlova, S. N. See Tuichinin, B. G.

Pavlovitsch, P., tanning, (P.), B., 182. Pavlovitsch, S. See Orcel, J.

Pavlovski, C., production of disintegration H-rays under the action of the a-radiation of polonium, A., 737. disintegration of aluminium, A., 737.

destructive action of a-rays on thin films of various substances,

A., 1124. Payman, J. B., Swann, H., Jenkins, W. J., and Imperial Chemical Industries, Ltd., cellulose ester solutions and plastics, (P.),

Payman, J. B. See also Imperial Chem. Industries, Ltd. Payman, W., and Wheeler, R. V., flame speeds and their calcula-

tion, B., 666. Payn, R. C., and Perman, E. P., vapour pressure and heat of dilution. VI. Heat of dilution of hydrochloric acid, sodium hydrochloric acid.

oxide, and acetic acid, A., 1389. Payne (Miss) C. H., and Williams (Miss) E. T. R., photometry of hydrogen and calcium lines in stellar spectra, A., 617.

Payne, E. H., Montgomery, S. A., and Standard Oil Co., treatment of emulsion oils, (P.), B., 884.

Payne, E. H., and Standard Oil Co., refining of hydrocarbon oil, (P.), B., 885.

Payne, R. W. See Brit. Celanese, Ltd.

Pazourek, J., internal secretion of the placenta, A., 1111. Peake, A. M. See Distillers Co., Ltd.

Peabody, W. A., and Hill, R. M., creatine. II. Effect of creatine on rabbits, A., 956.

Peabody Engineering Corporation, Leask, J. P., and Dyer, H. T., method and apparatus for burning finely-divided fuel, (P.), B., 161.

Peace, G., and British India Corporation, Ltd., rapid vegetabletannin process, (P.), B., 446. Peacock, D. H., Bhattacharya, M., and Rao, B. L., phenoxyethyl-

aniline and related compounds, A., 1289.

Peacock, M. A., nature and origin of the amphibole asbestos of S. Africa, A., 787.

Peaker, C. R. See McBain, J. W., and Thorvaldson, T.

Peakin, F. H. See Brady, O. L. Peale-Davis Co. See Davis, K

Pearce, J. N., and Knudson, C. M., adsorption of certain vapours by charcoal at various temperatures up to and above their critical temperatures, A., 256.

Pearce, J. N., and Peters, P. E., vapour pressure of ethylene chloride between -30° and 100°, A., 992.

Pearce, J. N., and Rice, M. J., adsorption of water, ethyl alcohol, ethyl acetate, and acetic acid vapours by tungstic and zirconium oxides; bearing on heterogeneous catalysis, A., 757.

Pearce, J. N., Taylor, M. D., and Bartlett, R. M., vapour pressures of aqueous solutions of potassium iodide and sodium bromide at 25°, A., 140. Pearce, J. N. See also Graham, H. C., Hebert, T. J., and Mc-

Kinley, L. Pearsall, W. H., and Ewing, J., relation of nitrogen metabolism to plant succulence, A., 612.

Pearse, P. L. See Davies, W. C. Pearse, R. W. B., ultra-violet spectrum of magnesium hydride. I. Band at 2430 A., A., 376.

ultra-violet spectrum of magnesium hydride. II. Many-lined γ-system, A., 1117.

Pearson, G. C., purification [of coal gas from hydrogen sulphide],

Pearson, G. L., relative probabilities of the ionisation of K and L electrons of equal ionisation energy, A., 1211.

Pearson, L. J., and Philadelphia Storage Battery Co., manufacture of storage battery plate, (P.), B., 606.

Pearson, T. F., graphitisation in iron-carbon-silicon alloys, B.,

Pease, H. Seo Gray Processes Corp.

Pease, R. N., non-explosive oxidation of propane and the butanes, A., 905.

Peat, S. See Haworth, W. N. Peat Products Co. See Roth, C. C. Pebody, P. L. See Mudd, J. S.

Peck, H. T., and Peters Cartridge Co., priming mixture for smallarms ammunition, (P.), B., 190. Pecsalski, T., kinetic theory of absorption, A., 133.

Pecsalski, T., and Chichocki, J., thermionic emission of copper

tubes filled with salts, A., 482.
Pedersen, J. D., coating [with wax the metal case of] ammunition cartridges, (P.), B., 266.
Pedersen, K. J., ketonic decomposition of β-ketocarboxylic acids,

A., 1018.

Pedersen, O. C. See Lunde, G. Pedersen, C. S., and Breed, R. S., fermentation of dextrose by organisms of the genus Serratia, A., 218.

Pedroni, A. See Albanese, A. Peebles, J., apparatus for cleaning sand filter-beds, (P.), B., 76.

Peebles, T. A., automatic combustion control, B., 231. Peek, A. E. J. See Den Hoed, D. Peel, J. B. See Briscoe, H. V. A.

Peet, C. H., evaluation of insecticides, B., 38.

Peeters, C., production of ferrous bicarbonate, (P.), B., 517.

Fehrson, A. H., extraction from gases or liquids of substances suspended or contained therein, (P.), B., 192, 1001\*

Pehrson, A. H. See also Bojner, G., and Wheeler, R. V. Pehrson, A. P. See Wheeler, R. V.

Peierls, R., dependence of ionisation potential on atomic number, A., 969. Peignier, P. See Vavon, G.

Peiler, K. E., and Hartford-Empire Co., mould for high-temperaturo casting of refractory bodies, (P.), B., 247.
manufacture of refractory compositions, (P.), B., 852.

Peiny, J., method of depilating hides, (P.), B., 369.

Peirce, F. T., two phase theory of the absorption of water vapour by cotton cellulose, A., 1141.

Peirce, J. O., Reddish, W. T., and Twitchell Process Co., isolating cellulose, (P.), B., 390.
Peirce, W. M., Anderson, E. A., and New Jersey Zinc Co.,

mechanically-worked zinc product, (P.), B., 648.

Peirier, anti-leprosy oils from the genus Caloncoba from the Cameroons, B., 870. Peitzsch, W. See Borsche, W.

Peklo, J. See Jodidi, S. L.

Pélabon, H., and Lande, (Mme.), thermal analysis; systems containing lead chloride or mercuric iodide as solvent, A., 1145. Pellerin. See Lasausse, E.

Pelzer, H. L., and Sinclair Refining Co., cracking hydrocarbon oils, (P.), B., 770.

cracking of hydrocarbon oils, (P.), B., 770.

Pelzer, H. L. See also Herthel, E. C. Pénau, H., and Hardy, Z., ergosterol-digitonin complex,  $\Lambda$ ., 730. Pénau, H., and Tanret, G., zymosterol, a dextrorotatory sterol of yeast, A., 809, 1176\*.

reduction of mercury salts by normal urine, A., 1480.

Pendergast, W. L., and Insley, H., service of refractory blocks in a small experimental glass tank, B., 246.

Pendergast, W. L. See also Heindl, R. A. Penfold, A. R., West Australian sandalwood oil. I., B., 536. essential oil from a Boronia in the pinnata section, from Frazer Island, Queensland, B., 537.

essential oil of a new species of anemone leaf Boronia rich in ocimene, B., 537.

concrete otto of Boronia metastigma (Nees), B., 537.

Penfold, A. R., and Morrison, F. R., occurrence of a number of varieties of *Eucalyptus dives* as determined by chemical analyses of the essential oils. II., B., 537.

exudation from the wood of Pentaspodon Motleyi, B., 538.

Pengn, M. A. See Gurvich, V. L.

Penin, P., Gummi-Waaren-Fabr. Akt.-Ges., and Wleeck, E., vulcanisation of plates or articles of rubber, (P.), B., 257. Penman, J. W., digesters, (P.), B., 192.

Penning, F. M., new photo-electric effect, A., 114.

corona discharge in neon, A., 481.

increase of the sparking potential of a gas mixture by irradiation, A., 735\*.

Pennsylvania Coal Products Co. See Davis, A. B.

Pennsylvania Crusher Co., rotary hammer mills and crushers, (P.),

Pennycuick, S., structure of water, A., 122.

Pennycuick, S. W., colloidal platinum. V. Coagulation by electrolytes in acid solution. VI. Behaviour of platinum sols in basic solution, A., 643.

Pentchev, N. P., determination of neon in natural gases, A.,

Pentegov, B., correlation between the adsorptive capacity of coals and peats and their other characteristics, B., 802.

Pentegov, B., and Njankovskaja, R., absorption characteristics of coals, B., 581.

Pentelow, F. T. K. See Butcher, R. W.

People's Gas By-Products Corporation. See Guthrie, R. G. Pepe, O. R., action of arsenic acid and its derivatives on nitro-

phenols, A., 1090.

**Pérard**, J., distillation columns for the production of alcohol, B., 735.

Percival, E. G.V., and Wardlaw, W., new polynuclear co-ordination compounds of cobalt, A., 898.

cobalt with a covalency of four: new series of complex com-

pounds, A., 1028. Percival, G. H. See Clark, A. J.

Percival, J. G. See Henderson, B. W.

Percy, E. N. See Yard, W. S. Perelis, W. J., treatment of mineral oils by heat, (P.), B., 348. Perelis, W. J., and Shell Development Co., treatment [cracking]

of mineral oils by heat, (P.), B., 916. Peres, J. C. See Favresse, M. E. P. Peretz, B. G. See Postovski, Y.

Periam, H. See Chamberlain, J.

Perino, J., manufacture of a vegetable alimentary product, (P.), B., 263.

Perkin, A. G., and Story, C. W. H., migration of the acyl group in partly acylated phenolic compounds. II. Synthesis of anthragallol 1:2- and 1:3-dimethyl ethers, A., 1074.

Perkin, A. G. See also Hardacre, R. W.

Perkin, W. H., jun., early history of the synthesis of closed carbon chains, A., 904.

Perkin, W. H., jun., and Robinson, R., strychnine and brucine. VIII. Action of hydriodic acid on strychnidine; dihydrostrychnidine (B) and substances derived therefrom, A., 830.

Perkin, W. H., jun. See also Blount, B. K., Chakravarti, S. N., Fawcett, R. C., and Koepfii, J. B.

Perkins, R. P. See Leuck, G. J.
Perkins, T. R., cadmium and beryllium peroxides, A., 1154. Perkins, W. G., treatment of complex copper ores, (P.), B., 479.

Perkins Glue Co. See Harvey, E. H.

Perl, A. See Kohorn, O. (Freiherr) von. Perl, J., and Cory, M. M., neutralising cellulose-bearing material for subsequent saccharification, (P.), B., 91.

Perl, J., and Sinclair Refining Co., cracking of hydrocarbons, (P.), B., 507.

Perl, K., & Steinitzer, F., Chemisch-technisches Institut, production of pure, finely-divided kieselguhr, (P.), B., 17.

Perley, A. M. See Morgnlis, S.

Perley, G. A., intensive production of sulphuric acid (d 1.70), B., 321.

Perley, G. A., and Varrell, M. W., [platinum] gauze catalyst in ammonia oxidation, B., 321.

Perley, G. A., and White, W. P., oxidation of ammonia from [coke-oven] crude by-product liquors, B., 583.

Perlitz, H., domain of the atom of bismuth in its crystal, A., 493. change of volumes and electric resistances of antimony and arsenic at fusion, A., 496.

Perman, E. P. See Payn, R. C. Permutit Co. See Friend, R. O., and Nordell, E.

Pernot, (Mlle.) M., system mercuric iodide-potassium iodideacetone, A., 400, 1145.

Péron, (Mme.). See Clarens, J. Perot, E. See Cournot, J.

Perov, S., identity of proteins, A., 835.

Perquin, J. N. J. See Waterman, H. I.

Perrakis, N. G., paramagnetic susceptibility of quinquevalent vanadium ion, A., 752.

Perrakis, N. G. Sec also Nicholson, S. B.

Perreau, (Mlle.) G. Sec Boutaric, A.

Perrette-Montamat, (Mme.) B., isotopy of lead, A., 233.

Perreu, J., determination of the limiting heat of dissolution of some hydrated salts (direct method), A., 1014. measurement of the limiting heat of dissolution of hydrated

salts (method of heats of dilution), A., 1014, 1238. Perrey, H. See Stollé, R.

Perrier, A., changes in the chlorophyll of a green alga, A., 359.

Perrin, F. See Delorme, R.
Perrin, J., determination of the rôle of light in thermal chemical reactions, A., 36.
Perrin, M. W. See McLennan, J. C.

Perry, C. E., and Evershed & Vignoles, Ltd., apparatus for detection and determination of impurities and dissolved matter in water and other liquids, (P.), B., 1001\*.
Perry, L. R. See Frolich, P. K.

Perry, S. Z. See Hibbert, H.
Perry, W. T. See McCallum, S. P.
Perschke, V. K., relations between physical constants of liquids,

A., 21, 249\*. relation between specific rotation and refractive index of a solution, A., 258, 647.

equilibrium between two solids in a common solvent, A., 1013.

Perschke, V. K., and Chufarov, G. I., corroding action of solutions of various chlorides on east iron and lead, B., 210.

Person, W. M., coke oven, (P.), B., 272. Persson, A. See Smith, L

Persson, E., structure of Heusler's alloy, A., 1132.

Persson, E., and Öhman, E., high-temperature modification of manganese, B., 899.

Persson, O. See Palmaer, W. Pertierra, J. M. See Buylla, B. A.

Pertzel, H. See Wartenburg, H. V.

Perucca, E., superficial properties of mercury, A., 381.

Pesch, T. See Levy, P. Peschke, W. See Schmalfuss, H.

Peski, A.J. van, decomposition of hydrocarbons into hydrocarbons containing fewer carbon atoms, (P.), B., 770, 843.

destructive hydrogenation of carbonaceous materials, (P.), B., 842

Peskin, A. R., urinary C:N and O:N ratios in phloridzin diabetes, A., 210.

Pestalozza, U., and Società Italiana Pirelli, manufacture of rubber articles, (P.), B., 653\*.

Pestalozza, U. See also Soc. Ital. Pirelli.

Pestel, E. See Weizel, W.

Pestrecov, K. Sec Dolejšek, V.

Petchaft, A. W. See Stout, L. E.

Peter, F., determination of the tin deposit on tin plates, B., 603.

Peter, F. See also Holluta, J. Peter, J. See Schönberg, A.

Peter, P. N., solubility relations for lactose-sucrose solutions. I. Lactose-sucrose solubilities at low temperatures, A., 131.

Péterfi, T., determination of  $p_H$  in cells and tissues, A., 109.

Peteri, (Frl.) M. G., and Elenbaas, W., variation of intensities in helium spectrum with pressure and electron velocity, A., 732. Peters, G. H. See Hercules Powder Co.

Peters, H. H., and Phelps, F. P., technical method of using the mercury arc to obtain data at wave-length 560  $\mu\mu$  in the spectrophotometric analysis of sugar products, B., 336.

Peters, J. P., and Eiserson, L., influence of protein and inorganic phosphorus on serum-calcium, A., 1478.

Peters, J. P. See also Friedenson, M., Frisch, R. A., and Oard, H. C. Peters, K., and Meyer, Karl, thermal production of acetylene from methane, B., 767.

Peters, K., and Weil, K., preparation of radium emanation, A., 1124.

Peters, K. See also Fischer, F., and Paneth, F. Peters, M. F. See Fairchild, C. O. Peters, P. E. See Pearce, J. N.

Peters, R. A., vitamin-B, A., 1203. Peters, R. A. See Gulland, J. M., Kinnersley, H. W., and Phelps, H.J.

Peters Cartridge Co. See Peck, H. T.

Petersen, H. P., treatment of combustible material [for use as pulverised fuel], (P.), B., 631. Petersen, K. W. Sco Paneth, F.

Petersen, M., beryllium hydride bands, A., 1350.

Petersen, W. F., Milles, G., and Müller, Ernst F., variations of the potassium: calcium quotient in the lymph in experimental sepsis, A., 345.

Peterson, C. E., and Bray, M. W., chemistry of the cellulose determination, B., 12. Peterson, C. E. See also Schafer, E. R.

Peterson, C. J., and Hixon, R. M., chemical examination of tissue of corn [maize] stalk, B., 591.

Peterson, J. M. See Gilman, H., Pickett, O. A., and Rodebush, W. H.

Peterson, V. L. See West, E. S. Peterson, W. H. See Allgeier, R. J., Foote, M., Lindow, C. W., Marten, E. A., Preuss, L. M., and Skinner, J. T.

Petherick, H. W., investigation of soda water for lead, B., 418. Petin, N. N. See Spitalski, E. I.

Petit, A.,  $p_{\rm II}$  values in the study of sea-water corrosion of light alloys, B., 779.

Petit, A. See also Cazaud, R.

Petit, F. See Girard, P.

Petits Fils de F. de Wendel & Cie., recovery of tin contained in the residues of tin plate manufacture, (P.), B., 288. Petow, H., and Kosterlitz, H. [with Probst], "active" iron, A.,

1486.

Petraschek, W. See Gothan, W.

Petree, L. G., and Alsberg, C. L., preparation of glycogen; glycogen of the abalone, *Haliotis rufescens*, Swainson, A., 838. Petrelius, G. V. Sco Aschan, O. Petrelli, J. Sce Underbill, F. P.

Petrenko-Kritschenko, P., periodic law, A., 272. law of periodicity, A., 675\*.

Petrenko-Kritschenko, P. [with Opotzki, V., Diakova, M., and Losowoy, A.], law of periodicity. IV., A., 537.
Petrenko-Kritschenko, P. [with Ravikovitsch, A., Opotzki, V.,

Putjata, E., and Diakova, M.], law of periodicity, A., 675\*.

Petri, L., behaviour of the olive under the influence of uranium radiations and of the ionisation of the air, A., 728.

Petrie, G. G. See Broad, W. R.

Petrikaln, A., origin of the luminescent light of phosphorus, A., 377.

importance of Raman spectra in the structure [and linking] problems in organic substances, A., 865.

Petrikaln, A., and Hochberg, J., Raman effect, A., 741, 865. Raman spectra of some organic and inorganic compounds, A., 1216.

Petroleum Conversion Corporation, treatment [cracking] of hydrocarbon compounds, (P.), B., 882.

Petroleum Conversion Corporation. See also Colony, W. M., and Knox, W. J.

Petroleum Derivatives, Inc. See Gibb, J. A.

Petroleum Sand Products Corporation. See Schwarz, Alfred. Petropuliades, S. See Klee, P.

Petrov, A. D., catalytic condensation at high temperatures of cyclohexanone and cyclohexene, A., 188.

3:5-diphenylcyclohexenone, A., 316. 3:5-diphenyl-12-cyclohexenone, A., 551.

Petrov, A. D. See also Ipatiev, V. N.

Petrov, G., saponification with the Twitchell and Pfeilring reagents, B., 27.

production of condensation products of phenols with aldehydes, (P.), B., 65\*.

production of [hard] soap, (P.), B., 1022.

Petrov, G., and Alexev, N., spinning of linen, hemp, and other fibres, (P.), B., 202.

Petrov, G., and Sokolov, N., splitting of fats, B., 401.

oxidation and polymerisation of ethyl esters from linseed acids, B., 402.

Petrov, G. S., Danilovich, A. J., and Rabinovitsch, A. J., exidation of mineral oils in presence of soluble catalysts, B., 7.

Petrová, J., a Wilson apparatus for convenient low pressures, A., 971.

range of  $\beta$ -rays from radium-D by the Wilson method, A., 972.

Petrovsky, A., rapid detection of tungsten in ores, B., 603. Petrunkin, M. See Borissov, P. I., Karassik, V. M., and Petrnnkina, A.

Petrunkina, A., and Petrunkin, M., combination of the protein of brain with alkaloids and organic bases, A., 90.

Petrnnkina, A. See also Borissov, P. I., and Karassik, V. M. Petsche, G. B. See Nat. Acmc Co.

Pettersson, H., luminous discharge in gases at low pressure, A., 377, 972.

H-particles made visible, A., 534.

Pettersson, H. See also Kirsch, G.
Pettibone, E. E. See Baker, E. M.
Pettingill, H. S., jun., and Empire Refineries, Inc., apparatus for distilling oil, (P.), B., 348.

Petty, O. H. See Karr, W. G.
Petzold, F. See Heinrich, F.
Pew, A. E., jun., Thomas, H., and Sun Oil Co., cracking of mineral oil, (P.), B., 120.

distillation of mineral oil, (P.), B., 745.

apparatus for mineral oil distillation, (P.), B., 769. apparatus for distilling mineral oil, (P.), B., 881.

Pexton, S., and Hutchison, W. K., sampling of gas over mercury at a constant rate, B., 999.

Pexton, S. See also Hollings, H.

Peyer, G., amount of reducing substance in organs of rabbit with varying blood-sugar content, A., 600.

Peyer, W., and Liebisch, W., two phloroglucinol drugs, A., 730. Peyrachon, P. J., apparatus for manufacturing iron and steel, (P.), B., 856.

Peyresblauques, G. See Brus, G.

Pfanhauser, J., moisture content of petrographic varieties of Polish coal, B., 965.

Pfanhauser, W., control of the current density in electrolytic baths, B., 289.

nickel-chromium [plating] process, B., 359.

Pfannenstiel, A. See Kautsky, H. Pfanner, H. See Wagner, Hans.

Pfaudler Co. See Hunziker, O. F

Pfeffer, E. See Grasselli Dyestuff Corporation.

Pfeiffenberger, A. See Leimbach, G.

Pfeiffer, G., cholesterol of protoplasm. I. Ox-heart, A., 90. determination of small amounts of iodine in organic products. II., A., 110.

[iodine determination], A., 1204.

Pfeiffer, G., and Courth, H., transport and transformation of organically bound plant-iodine in the animal body, A., 1486. Pfeiffer, G. H. See Speicher, J. K.

Pfeiffer, M. See Ruzicka, L.

Pfeiffer, P., and Angern, O., constitution of stannic acid, A., 1307.

Pfeiffer, P., Behr, H., Kübler, H., and Rüping, H., synthesis of [2-]phenylindones from cinnamonitriles, A., 441. Pfeiffer, P., Engelhardt, L., and Alfuss, W., esterification of

aromatic and olefinic nitriles, A., 184.

Pfeiffer, P., Schmitz, Helmut, and Inone, T., molecular compounds from aromatic iodo-compounds, A., 440.

Pfeiffer, P., and Willems, J., brazilin and hæmatoxylin. IX. Compounds of the phenoxyacetone series, A., 822. Pfeil, L. B., oxidation of iron and steel at high temperatures, B.,

Pfiffner, J. J. See Rockwood, E. W. Pfizer & Co., C. See Pasternack, R. Pfieger, J., and Albert, A., production of unsymmetrical arsenocompounds, (P.), B., 538\*

Pfund, A. H., metallic reflexion from rock-salt and sylvite in the Schumann region, A., 1365.

Pfundt, O., and Junge, C., visual conductivity-titration as aid in the determination of phenols; alkalimetric titration of proto-catechualdehyde and its monoalkyl ethers, A., 586.

Pfundt, O. See also Fehn, H., Jander, G., and Schorstein, H. Phair, R. A., and Kohnstamm & Co., Inc., H., protecting fabric, (P.), B., 774.

Pharmaceutische Werke "Norgine" Akt.-Ges. See Hermann, S. "Pharmagans" Pharmaceutisches Institut, L. W. Gans Akt.-Ges., manufacture of phosphatides, (P.), B., 110.

"Pharmagans" Pharmaceutisches Institut, L. W. Gans Akt.-Ges., Kollath, W., and Magistris, H., manufacture of lipoids, particularly phosphatides, (P.), B., 576. manufacture of lipoids, particularly phosphatides, having

different vitamin actions, (P.), B., 836. Phebus, W. C. See Blake, F. C. Phelan, J. J. See Gen. Electric Co.

Phelan, R. E., Lowe, S. P., and Channing, R. H., jun., flotation concentration, (P.), B., 59.

Phelps, F. P., and Purves, C. B., structure of a-mothylxyloside, A., 1166.

Phelps, F. P. See also Peters, H. H.

Phelps, H. J., adsorption of fumario and maleio acids by puro charcoals, A., 1140.

Phelps, H. J., and Peters, R. A., influence of hydrogen-ion concentration on the adsorption of weak electrolytes by puro charcoals, A., 1000.
Phelps, R. G. Sco Brit. Thomson-Houston Co., Ltd.

Phemister, T. C., Kewecnawan sill-rocks of Sudbury and Cobalt, Ontario, A., 419.

Phenix Cheese Corporation, cheeses and their preparation, (P.), В., 535.

Philadelphia Storage Battery Co. See Grimditch, W. H., Holland, W. E., and Pearson, L.J.

Philipon, H.J. F., and Société Anonyme "l'Air Chaud," operating

molten-slag gas producers, (P.), B., 707\*.
Philipp, K., and Donat, K., long-range a-particles from radium-C, A., 371.

Philipp, K. See also Erbacher, O.

Philippi, E., preparation of unsaturated acids and esters, A., 792. linear pentacene series. XIII. Nomenclature; questions of structure, A., 1436.

Philippi, E., Gaiter, E., Zorzi, M., and Bertel, E., action of ammonia and amines on the esters of unsaturated acids, A., 792. Philipsborn, H. von, relations between refractivity, density, and chemical composition in the granite group, A., 289.

Phillips, A., Baron, E., and Metropolitan-Vickers Electrical Co., Ltd., production of aluminium-silicon alloys, (P.), B., 250. Phillips, A. J., behaviour of cellulose nitrate gels in polarised

light, A., 260. Phillips, A. W., Mack, M. J., and Frandsen, J. H., washing powders

for dairy use, B., 415.

Phillips, A. W. See also Richards, T. W.

Phillips, C. E. S., selenium and cathodo rays, A., 620.

Phillips, E. B., Stafford, J. G., and Gray Processes Corporation,

refining of hydrocarbon oils, (P.), B., 508.
Phillips, E. B., Stafford, J. G., and Sinclair Refining Co., refining of petroleum, (P.), B., 770. dewaxing of oil, (P.), B., 884.

Phillips, H. See Holloway, J., and Houssa, A. J. H.

Phillips, J. G. See Fréchette, H.
Phillips, J. W. C., Davies, J. S. H., and Mumford, S. A., chlorination products of  $\beta\beta'$ -dichlorodicthyl sulphide. II., A., 539. Phillips, J. W. C. See also Mumford, S. A. Phillips, M., lignin. III. Destructive distillation of lignin from

corn oobs, A., 1168.

Phillips, M. A., heterocyclic arsenic compounds. V. Benz-

iminazolearsinio acids, A., 202.

Phillips, M. A. See also Newbery, G.

Phillips, (Miss) M. L., visible radiation characteristics of incandes-

cent oxides, A., 117.

Phillips, T. G. See Appleman, C. O.

Phillips, W. H., and Davies, W., ["grease pot" device for] manufacture of tin plates, (P.), B., 216.

Phillips, W. H., and Molybdenum Corporation of America, ferrous base article of manufacture [case-hardened molybdenum steel].

(P.), B., 329.
Philo, F. G., electrolytic corrosion prevention of condenser tube corrosives, B., 75.

Philpott, D. See Cullinane, N. M.

Phipps, H. E., falling-sphere viscosimeter and plasticity measure-

ments, A., 535.
Phipps, T. E., and Partridge, E. G., temperature-conductivity curves of solid salts. II. Halides of potassium and thallium A., 753.

Phipps, T. E: See also Albers, V. M.

Phosphorus Hydrogen Co. See Miner, C. G.

Phragmen, G. Seo Westgren, A. Phukan, L. N. See Mitra, S. K.

Piacentini, P. See Ficai, C.

Piano, G., behaviour of Kossier's phosphate in arable soil, B., 904. Piano, G. See also Scurti, F.

Piatinski, M., acids of tobacco as a qualitative indication of its value, B., 796.

Piatti, L., dependence of the photo-electric conductivity of red mercuric iodide on the temperature, A., 1213.

Piatti, L. See also Weissenberger, G. Picard, H. F. K. See Sulman, H. L.

Picareff, A., and Picareff Art Studios, Inc., A., colouring agent for

fabrics, (P.), B., 811.

Picareff Art Studios, Inc., A. See Picareff, A.

Piccardi, G., molecular spectra in sunspots, A., 11.

X-ray levels of the rare earths, and the deviations from Moseley's laws, A., 382.

new bands in the spectrum of lanthanum oxide, A., 977.

band spectra of the oxides of praseodymium, neodymium, and samarium, A., 1207.

Piccardi, G. See also Rolla, L.

Piccardo, C., combined decanting and filtering apparatus, (P.), B., 499.

Pichard, G., apparatus for fractional distillation, A., 533.

Pichard, G. Seo also Rivière, G. Pichler, H. Seo Fischer, Franz.

Pichon, M., basic titanium salicylate, A., 600.

use and elimination of water-soluble camphor derivatives, A., 721.

nitrogen derivatives of 2-hydroxy-3-methoxybenzaldehyde and their metallic compounds, A., 1178.

Pickard, H. See South Metropolitan Gas Co.

Pickard, J. A., [metallic edge-]filters, (P.), B., 627. Pickard, R. H., Lloyd, D. J., and Caunce, A. E., production of leather, [gas-tanned] leather, and chrome-tanned leather for dyeing, (P.), B., 653\*.

Pickat, A., relations of the pituitary gland to carbohydrate metabolism, A., 1110.

relation of the pituitary to carbohydrate metabolism, A., 1343. Pickering, J. W., anticoagulant action of Witte's peptone, A.,

Pickering, S. F. See Smith, Francis A. Pickersgill, W. R. A. See Postnikoff, A. A. Pickett, L. W. See Sherrill, M. L.

Pickett, O. A., apparatus for vapour-pressuro determinations, A., 417.

solvents for waxes, B., 861. Pickett, O. A., and Peterson, J. M., terpenes and terpene alcohols. I. Vapour pressure-temperature relationships, B., 453.

Pickles, L. S., "wet" purification of coal gas: a review of past and present methods, B., 929.

Pickup, H., and Claringbold, W. E., sanitary cleansing agent, (P.), B., 912.

Picon, effect of high temperatures on some metallic sulphides, A., 1012.

Picon, M. See Fabre, R.

Pictet, A., molecular constitution of starch and its depolymerisation by heat, B., 695.

Pictet, A., and Vogel, H., synthesis of sucrose, A., 913.

new series of starch depolymerisation products, A., 914. sugar anhydrides, A., 1167.

Pidduck, F. B., magnetic moments of hydrogen-like atoms, A., 6. Pidgeon, D. G., and Tester, H. E., properties and analysis of used crank-case oils, B., 346.

Piekara, A., dielectric constant of emulsions of water and mercury in oil, A., 27, 1234\*.

relation between the dielectric constant of an emulsion of mercury in vaseline and the degree of dispersion, A., 27, 1234\*.

Pieńkowski, S., origin of the band  $\lambda\,2476\cdot3-2482\cdot7$  in the spectrum of mercury, A., 1.

delayed green fluorescence of mercury vapour, A., 9.

Pieper, B. See Rupe, H. Pieper, E. J. See Vogt, C. C.

Pierce, H. B., and Kilborn, R. B., determination of indole in bacterial cultures, A., 474.

Pierce, H. F., shaker for the Van Slyke blood-gas apparatus, A., 166.

Pierce, J., reaction between nitric oxide and hydrogen sulphide, A., 281.

Pierce, J. A., detection and determination of carbon disulphide and sulphur in fluids [e.g., olive oil], B., 1021.

Pierce, J. B., jun., manufacture of [white] pigments, (P.), B., 610. Pierce, J. S., and Setzer, W. C., determination of iron and aluminium oxides, magnesium oxide, and calcium oxide in Portland cement, B., 284.

Pierce, W. C., photochemical studies. IX. Uranyl sulphate as sensitiser for the photochemical decomposition of oxalic and

malonic acids, A., 1404.

Pierce, W. C., Leviton, A., and Noyes, W. A., jun., photochemical studies. VIII. Photochemical decomposition of malonic acid both in the presence and absence of uranyl sulphate, A., 277.

Pierce Petroleum Corporation. See Finlay, J.  $\vec{W}$ .

Pierey Co. See Robinson, H. Pieroh, K. See I. G. Farbenlad. A.-G.

Pieronl, A., naphthophenoxanthones, A., 703.

Pierre, W. H., and Worley, S. L., the buffer method and the determination of exchangeable hydrogen for determining the amounts of lime required to bring soils to definite  $p_{\rm H}$  values, B., 68.

Pierri, J. See Dworzak, R. Pierron, J. See Courtot, C.

Piersol, R. J., effect of current density on the hardness of electrodeposited chromium, B., 944.

Pierson, H. D. (Heldring & Pierson), and Ledeboer, A. E. M. (Staalsynd. Ledeboer), direct production of iron or steel, (P.),

Pieters, H. A. J., Wood's metal as cathode in electrolysis, A., 161. Fajans' method of titration, A., 161.

dehydration of kaolin, B., 323.

Pieters, H. A. J., and Heijden, J. H. van der, determination of calcium oxide in quicklime, B., 977.

Pieters, H. A. J., and Koenen, T. H., anthracene. I. Methods of analysis, B., 635.

Pieters, H. A. J., and Mannens, M. J., extraction of pyridine and phenol from crude benzene, B., 584.

determination of arsenic in sulphuric acid, B., 1043.

Pieters, H. A. J., and Meylink,  $\hat{J}.$  A., new laboratory materials, B., 963.

Pieters, H. A. J. See also Nieuwenburg, C. J. van.

Pieters, J., vertical continuous distillation furnace, (P.), B., 464. Pieters, J. See also Gevers-Orban, E.

Pieters, J. A. A. See Westenbrink, H. G. K. Pieters, J. J. L. See Westenbrink, H. G. K.

Pietsch, E., Kotowski, A., and Berend (Frl.) G., topochemistry of contact catalysis. IV. Experimental proof of adlineation by topochemical reactions, A., 1150.

topochemical reactions showing adlineation, A., 1397.

Pietsch, E., and Schwab, G. M., critical potentials of methane, A., 1122.

Pietsch, E. See also Schwab, G. M.

Pietsch, K. See Gothan, IV.

Piettre, M., serum-albumin; crystallisation in the absence of ions, A., 461. Pigache, P. G. M. A., decohering solid substances, (P.), B., 928.

Piggot, C. S., radium and geology, A., 163.

radium in rocks. I. Radium content of some representative granites of the eastern seaboard of the United States, A., 1035.

Piggot, C. S. See also Fenner, C. N. Pignot, A. See Aubert.

Pigulevski, G. V., and Lovyagin, Y. N., essential oil of Juniperus excelsa, B., 957.

Pigulevski, G. V., and Riskina, N. B., process of formation of essential oils and resins in conifers. XI. Composition of the oil from the needles of *Pinus silvestris*; process of formation of essential oils and resin in pine trees, B., 72.

Pigulevski, G. V., and Zaikina, Z. M., mechanism of formation of essential oil in the resin of conifers. XII. Formation of the

essential oil of Pinus silvestris, B., 339.

Pijoan, J. R. See Alsina, F. D. Pike, F. J. See Stone & Co., Ltd., J.

Pike, R. D., fuel economy in burning Portland cemont clinker,

calculation of carbon balance of metallurgical furnaces, B., 97. [heat] insulation of roofs of glass furnaces, B., 208.

heat transfer in the rotary kiln burning Portland cement clinker, B., 324.

fuel economy in the rotary kiln burning Portland cement clinker,

Pike, R. D., and Cummings, R., production of potassium salts and by-products, (P.), B., 53.

Pike, R. D., Steck, L. V., and Cummings, R., manufacture of potassium carbonate, (P.), B., 896. Pike, R. D., and West, G. H., thermal characteristics and heat

balance of a largo oil-gas generator, B., 310.

Pike, R. D., West, G. H., Little, B. P., and Pike, R. D., cell for electrodeposition of metals, (P.), B., 25.

Pike, J. See Späth, E.
Pikoul, I. N. See Smorodincev, J. A.
Pikul. See Koldajev, B.

Pilaar, W. M., determination of carbon monoxide in blood, A., 1094\*.

Pilat, S., and Dawidson, E., naphthenesulphonic acids, B., 47. naphthenesulphonic acids [in oil refining], B., 768.

Pilat, S., Piotrowski, W. J., and Winkler, J., higher alcohols from petroleum hydrocarbons. II., B., 743.

Pilat, S., and Winkler, J., higher alcohols from petroleum hydrocarbons. I., B., 743.

Pilat, S. See also Gasiorowski, S., and Holzmann, E.

Pilkington Bros., Ltd., and LeMare, E. B., production of glass in strip form and apparatus therefor, (P.), B., 777.

Pillet, D. Sco Policard, A. Pilling, N. B., and Ackerman, D. E., resistance of iron-nickel-

chromium alloys to corrosion by acids, B., 778. Pilling, N. B. See also Internat. Nickel Co.

Pilny, O., See Pilny, A.

Pilot, I. H., machines for crushing coke, coal, and other materials in the form of lumps, (P.), B., 971.
Pilot Laboratory, Inc. See Stoddard, W. B.

Pilpel, F. See Riesz, E.

Piña de Rubies, S., arc spectrum of samarium; measurements at normal pressure between 3100 and 2750 X., A., 479.

are spectrum of samarium; measurements made at normal pressure between \(\lambda\) 2750 and 2200 X., A., 617. amplifier for comparison of spectra, A., 731

Pinenssen, L., and Gornitzkaja, E., [physiological] action of sulphur, A., 409.

Pincussen, L., and Kambayashi, Y., enzymes and light. XIII. Action of light on takadiastase in presence of sensitisers, A., 352. Pincussen, L., and Kawakami, T., changes in metabolism during

irradiation. V. Changes in carbohydrate metabolism. II., A., 844.

Pincussen, L., and Oya, T., enzymes and light. XIV. Effect of temperature on the action of light, A., 722

Pincussen, L., and Roman, W., methods. I halogens in organic substances, A., 713. IX. Determination of

micro-determination of silver in blood and physiological material, A., 1500.

Pincussen, L., and Zuckerstein, E., changes of metabolism during irradiation. IV. Fat content of organs, A., 719.

Pincussen, L. See also Loewy, A.

Pinder, J. H. See Haley, J. P.Pineau, J. See Delépine, M.

Pine-O-Pine Co. Sec Hager, L.

Pines, A., and Joffe, M., rate of settling of red blood-corpuscles and surface tension, A., 1325.

Pines, C. C. See Leffmann, H.

Pines, I., polarographic studies with the dropping mercury cathode. III. Deposition of cadmium from cyanide solutions, A., 1015.

polarographic studies with the dropping mercury cathode. IV. Deposition of zinc from cyanide solutions, A., 1151.

Pinhey, K. G. See Pirie, N. W.

Pinilla, B. See Delcourt.

Pink, F., apparatus for separating liquids of different densities, (P.), B., 3.

Pinkus, A., and Henry, L., iomisation accompanying oxidation of nitric oxide, A., 11.

Pinkus, A., and Ruyssen, R., ionisation accompanying the thermal decomposition of ozone, A., 12.

Pinner, M. See Knowlton, K.

Pinner, W. L., and Baker, E. M., "bent cathode test" for determining the optimum ratio of chromic acid to sulphate in chromium plating baths, B., 480.

Pinter, T. See Pushin, N. A.

Pintsch Akt.-Ges., J., quenching of coke, (P.), B., 548.

Pintsch & Otto Ges.m.b.H., reducing excess gas pressure in the lower part of freshly charged vertical chambers or retorts, (P.), B., 10.

Pintsch & Otto Ges.m.b.H. Sco also Chamber Ovens, Ltd.

Pinxteren, J. A. C. van, analysis of Peruvian bark, and the liquid extracts prepared therefrom, B., 996.

Piotrowski, A., preparation of isovaleric acid from fusel oil, B.,

Piotrowski, W. J., and Winkler, J., the Conradson number [of lubricating oils], B., 119.

Piotrowski, W. J. See also Pilat, S.

Piper, S. H., X-ray examination of some salts of the fatty acids,

Á., 383.

long spacings of fatty acids, A., 751.

Pipkin, M. See Brit. Thomson-Houston Co., Ltd.

Pirani, M., and Pateut-Treuhand Gesellsohaft für Elektrische Glühlampen m.b.H., manufacture of translucent, hollow glass articles, particularly of milk-glass bulbs, for electric incandescence lamps, (P.), B., 558\*.

Pire, L. R., and Moles, E., revision of the density of carbon monoxide, A., 873.

Pire, L. R. See also Moles, E. Pirie, N. W., and Pinhey, K. G., titration curve of glutathione, A., 1492.

Pirngadi, fatty substances in the blood of Indonesians and Europeans in the tropics, A., 1477.

Pirngadi. See also Radsma, W.

Piron, E., Caraoristi, V. Z., and Piron Coal Distillation Systems, Inc., apparatus for distillation [of solids], (P.), B., 505

Piron, E, and Piron Coal Distillation Systems, Inc., purifying gases [from distillation of wood], (P.), B., 632.

Piron Coal Distillation Systems, Inc. See Piron, E. Pironmov, R. S., and Loomis, N. E., designing flash-distillation equipment for petroleum refining, B., 877.

Pirrone, F., determination of citric and tartaric acids, A., 836.

Pirrone, F. See also Ricca, B.

Pirschle, K., assimilation of carbamide by higher plants, A., 1346. Pisani, F., reaction for carbamide, A., 302.

Pischel, H. E. See Hixson, C. T.

Pischinger, A., diffusibility and dispersity of dyes and their relation to colour at various hydrogen-ion concentrations, A., 645. Pissarenko, A. See Smetkin, A.

Pistor, G. See I. G. Farbenind. A.-G.

Pistorius, A., and Bunge, F. C., process for splitting coal into its

constituents, (P.), B., 87. Pi-Suffer Bayo, C., dismutation of methylglyoxal and of phenylglyoxal by the enzyme from green leaves (of the lime tree), A., 1491.

production of methylglyoxal in the fermentation of sugar with extract of macerated yeast, A., 1491.

Pitman, G., self-emptying suction flask for sugar determinations. B., 449.

Pitscheta, V. V. See Spitalski, E. I.

Pitt, A. See Burton, E. F. Pitt, W. J., effect of calcium chloride and calcium oxychloride on Portland cement, B., 130.

Pittenger, P. S., and Krantz, J. C., jun., stability of homatropine hydrobromide solution, B., 36.

Pittsburgh Plate Glass Co., process and apparatus for rolling plate

glass, (P.), B., 898.
Piutti, A., and De'Conno, E., Ricinus lipase. I. (a) Hydrolysis of esters and of beeswax. (b) Hydrolysis of carbohydrates,

Ricinus lipase. II. Hydrolysis of lecithin. III. Hydrolysis of phytin, A., 217.

Pivetz, W. See Kremann, R.

Pivovarsky, E., anomalies in the structure of steel, B., 57.

Pivovarsky, E., and Edelgussverband G.m.b.H., manufacture of cast iron, (P.), B., 523.

Pivovarsky, E., and Vereinigte Stahlwerke Akt.-Ges., production of cast iron, (P.), B., 754.

Pivovarsky, E. See also Kötzschke, P., Schichtel, K., and Zingg, EPlaceres, J., pharmaceutical preparations containing lactic acid organisms, B., 35.
Placinteanu, I. I., statistics of photons, A., 736.

Placzek, G., determinations of the density and shape of sub-

microscopic [standard] substances, A., 868. Plaisted, H. M., [air] separator, (P.), B., 913. Plaksin, I., system gold-mercury. I., A., 1012.

Plancher, G., indoline and 2-methyl-4:5:6:7-tetrahydroindole, A.,

Plancher, G., Cecchetti, B., and Ghlgi, E., homologues of tetrahydrocarbazole, A., 1078.

Plancher,  $G_{\cdot \cdot}$ , Rossi,  $G_{\cdot \cdot}$ , and Ghigi,  $E_{\cdot \cdot}$ , pyrrole derivatives,  $A_{\cdot \cdot}$ 1079.

Planck, M., P.D. of dilute solutions. II., A., 402.

Plant, F. S., damp-proof paints for walls, (P.), B., 903.
Plant, H. J. Seo Bennion, F.
Plant, S. G. P., and Rosser, R. J., stereoisomerism in substituted

1:2:3:4-tetrahydroquinolines. I., A., 1311.

Plant, S. G. P., and Rutherford, K. H., derivatives of tetrahydrocarbazole. VIII. Formation and reactions of nitric acid addi-

tion products, A., 1312. Plant, S. G. P. See also Blount, B. K.

Plastic, Inc. See Kennedy, A. L.

Plastoid Products, Inc. See Greenleaf,  $R.\ M.$  Plastridge,  $W.\ N.$  See Rettger,  $L.\ F.$  Platenius, H. See Blish,  $M.\ J.$ 

Platen-Munters Refrigerating System Aktiebolag, separation of impurities from circulating air, gas, or vapour [by "electret" filter], (P.), B., 626.

absorption refrigerating apparatus, (P.), B., 762.

evaporator units for [absorption] refrigerating apparatus, (P.), B., 877.

Platen-Munters Refrigerating System Aktiebolaget. See also Electrolux, Ltd.

Platt, H. See Dreyfus, C.

Platiner, F., Galehr, O., and Kodera, Y., fate of acetylcholine in the blood. IV. Dependence of acetylcholine decomposition on hydrogen-ion concentration, A., 589.

Plattner, P. See Cherbuliez, E. Platts, T. H. See Brit. Celanese, Ltd.

Platz, K. Seo Fischer, Hans.

Platzmann, C. R., effect of calcium chloride on cement, B., 852. cellular cement mortars, B., 1016.

Plauen, H. Enzio (Graf) von, manufacture of building blocks, artificial stones, tiles, and other shaped objects, (P.), B., 853.

Plauson, G., tar products [for road making], (P.), B., 633.

Plauson, H., producing rapidly-moving electrons and subjecting matter thereto, (P.), B., 25. synthesis of [organic] nitrogen compounds, and of liquid hydro-

carbons, (P.), B., 511. preparation and application of road-surfacing compositions, (P.), B., 817.

manufacture of liquid or pasty emulsions from natural or artificial bitumen or tar, (P.), B., 970.

Plauson, H., and Mineral Akt.-Ges. Brig, preparation of bituminous

emulsions, (P.), B., 425\*.

Player, E., and Parc Engineering Co., Ltd., mixing of gases and

liquids, (P.), B., 1002\*.
Plaza, G. R. See Orcel, J.
Plé, J., purification of pepsin, A., 1107.

Pleasant, M. E. See Lyons, R. E. Pleass, (Miss) W. B., absorption of water by gelatin. III. Tho sulphate system, A., 880.

determination of the  $p_H$  value of tan liquors and lime liquors, B., 729.

Plechner, W. W. See Curtman, L. J.

Plessis, M. See Douris, R. Pletney, S., determination of chlorine and carbonyl chloride in mixtures, A., 1410.

Plimmer, R. H. A., and Burch, W. J. N., esters of phosphoric acid.

 Phosphates of cetyl alcohol, cholesterol, chloroethyl alcohol, and ethylene glycol. II. Action of ethyl metaphosphate on alcohols, ammonia, and some amino-compounds, A., 422. Plimmer, R. H. A., Raymond, W. H., and Lowndes, J., nutrition.

IX. Comparative vitamin-B values of pulses and nuts, A.,

Plisov, A. K., photochemical formation of ammonium [type] salts, A., 659.

polymerisation of pyrrole, A., 706. mechanism of formation of compounds of the dibenzyl series from the nitrotoluenes and their derivatives by the action of alcoholic alkali hydroxides, A., 1435.

Ploetner, O., treatment [sizing] of artificial silk yarn, (P.), B., 514.

Ploos van Amstel, J.J. See Arkel, A.E. van.

Plotnikov, J., photochemical properties of the halogens, A., 522. measurement of luminescence, A., 979.

apparatus for strong ultra-violet and infra-red light and photography with heat rays, A., 1033.

quanta-yield and "chemismus" in light reaction, A., 1403.

Plotnikov, V. A., and Jakubson, S. I., system aluminium bromidepotassium bromide in benzene, A., 144.

electrochemistry of solutions of phosphorus pentachloride in bromine, A., 144, 768\*.

compound of phosphorus pentachloride with bromine, A., 158, 663\*.

electrochemistry of the system AlBr<sub>3</sub>-KBr in benzene, A., 768\*. Plotnikov, V. A., Rabinovitsch, M., and Zyvotinski, P. B., electrolysis through a crystalline diaphragm, A., 154.

Plücker, W., and Bartels, W., determination of the bacterial count of water, B., 76.

Plüschweberei Grefrath Akt.-Ges., printing patterns on plush fabrics, etc., (P.), B., 354. Plumb, E. F. See Bergman, W. G.

Plummer, W. B. See Burke, S. P. Plummer, W. G. See McLennan, J. C. Plusnin, V. G. See Postovski, Y.

Plyler, E. K., combination frequencies of the infra-red bands of quartz, A., 236.

near infra-red absorption spectra of calcite and strontianite, A., 974.

Plyler, E. K., and Steele, P. J., infra-red absorption spectra of organic nitrates, A., 1215.

Pneulec, Ltd., and Pritchard, P., treatment of foundry sand and other finely-divided materials, (P.), B., 3.

Pneumatic Conveyance & Extraction, Ltd., and Smith, W. A., rotary separators, (P.), B., 78.

air- and gas-washing apparatus, (P.), B., 500. Pochin, H. S., and Cheltnam, C. H. W., apparatus for separating solid impurities from air and gases, (P.), B., 460.

Pochobradsky, B. See Gen. Electric Co., Ltd.

Podaschewsky, M., influence of plastic deformation on the internal photo-electric effect in rock-salt crystals, A., 969.

Podbielniak, W. J., fractional distillation analysis, B., 799.

Podbielniak, W. J., and Brown, G. G., vaporisation of complex mixtures [of petroleum hydrocarbons], B., 767. Podbreznlk, F., lignin colouring matters, A., 1168.

colour reactions of lignin, B., 352.

humic acids in coal and lignite, A., 1275. Podbreznik, F. See also Soum, M.

Podesta, A. See Valle, G.

Podolsky, B., Raman effect in atomic hydrogen, A., 627.

Podolsky, B., and Pauling, L., momentum distribution in hydrogenlike atoms, A., 972.

Podszus, E., and Hartstoff-Metall Akt.-Ges. (Hametag), pulverising process [for metals], (P.), B., 330\*.

Podszus, E., Kramer, E., and Hartstoff-Metall Akt.-Ges. (Hametag), production of metal-powder articles of spherical shape, (P.), B., 330.

Poe, C. F., Lipsey, G., and Vaughn, C. L., determination of camphor in camphor liniment. I. U.S.P. X. method, B., 659.

Pöchmüller, E. See Pongratz, A.

Pöhlmann, C., absorption refrigerating plants, (P.), B., 344.

Pöhls, P. See Meerwein, H.

Pöll, H. See Suida, H.

Pölzguter, F., and Zieler, W., influence of heat-treatment on properties of tungsten steel, B., 437.

Pöppelmann, O. See Singer, K.

Pörscke, P., [porous electrodes for] galvanic cells, (P.), B., 25. Poetzsch, W. G., centrifugal apparatus for recovery of vapours from air drawn off from chromium[-plating] baths, (P)., B., 178. Pogany, B., and Schmid, R., intensity of y-bands of nitric oxide, A., 749.

Poggi, R., the double linkings in vaseline, especially in that used

for smokeless powders, B., 159.
Pogodin, S. A. Sce Ageev, N. V.
Pohl, R. W. See Hilsch, R.
Pohland, E. See Stock, A.

Pohle, K., occurrence of muscle-adenylic acid and hexosemonophosphoric acid (lactacidogen) in the heart, A., 1329.

lower enzymic fission products of muscle-adenylic acid, A., 1479.

Pohle, K. A. See Sauerwald, F.

Pohlman, G. G. See Burgess, P. S. Pohlmann, J., and Rassers, J. B. F., removing albuminous substances from saccharine juices, molasses, etc., (P.), B., 866\* preparation of milk, skimmed milk, or butter-milk, free of milk sugar [lactose] for sufferers from diabetes, B., 1030.

Poindexter, F. E., and Kernaghan, (Miss) M., surface tension of sodium, A., 745.

Poirot, A., emission of anode rays of sodium and of chromium,

Pokrovsky, S., possible relation between Planck's constant h and the radiation pressure of circularly polarised rays, A., 1210.

Pokrowski, G. I., apparent Mie effect and atmospheric optics, A., 379, 495.

synthesis of elements. I., II., and III., A., 623, 739, 1360 possible cause for the transformation of energy into matter, A., 973.

optical method for measuring size of particles in suspensions, B., 153.

Pokrowski, G. I. See also Voronkov, G. P.

Polack, W. G. See Moore, J. W.

Polak, F., sulphite fermentation, A., 1339.

Polak, F., and Tychowski, A., chemistry of starch, A., 1488. Polak, O. See Dischendorfer, O.

Pólányi, M., application of Langmuir's theory of the adsorption of gases on charcoal, A., 256.

potential theory of adsorption, A., 1001. activation process at boundary surfaces, A., 1377.

Pólanyi, M., and Bogdandy, S. von, manufacture of finely-distributed or colloidal mixtures of bodies insoluble in one another [metals and oils], (P.), B., 701.

Pólányi, M., and Schay, G., highly attenuated flames. III., A.,

Pólányi, M., and Schmid, E., plasticity; deformation at low temperatures, A., 743.

Pólanyi, M., and Wigner, E., interference of characteristic vibrations as cause of energy fluctuations and chemical changes, A., 404

Pólányi, M. See also Frommer, L.

Polard, V., Gibbs' theorem applied to heterogeneous equilibria, A., 267.

influence of extension and contraction of the surface in the phenomenon of triboelectricity of mercury, A., 990.

Pole, G. R. See Schurecht, H. G.

Polgar, N. See Späth, E.

Polgrean, J. H., selenium-red as a ceramic colour, B., 394.

Policard, A., and Pillet, D., detection of potassium and sodium in the cytoplasm of red blood-corpuscles by micro-incineration, A., 588.

Polikier, H., Boeger, O., and General Aniline Works, Inc., triaryl-methane dye, (P.), B., 974\*.

Poljakov, A., structure of the hæmoglobin molecule. I. Nitrogen distribution in the hæmoglobin molecule of horse's blood. II. Nitrogen distribution in the globin molecule of horse hæmoglobin, A., 338, 1094\*

Poljakov, A., and Kolokolov, N., colorimetric determination of arsenic, A., 1500.

Pollaczek, K. F. See Spiegel-Adolf, M.

Pollak, F. (Chem. Fabr. Stockerau F. Pollak), manufacture of glass threads, (P.), B., 172.

Pollak, F. See also Ripper, K.

Pollak, Friedrich, kinetics of the reaction between bromic and hydrobromic acids, A., 1396.

Pollak, J, and Gebauer-Fülnegg, E, coupling reactions, A., 58. Pollak, J., Gebauer-Fülnegg, E., and Blumenstock-Halward, E. [with Schlesinger, A., and Stehno, H.],  $\beta$ -naphtholdisulphonyl chlorides, A., 1441.

Pollak, J., and Meissner, F. von, constitution of the m-xylencsulphonic acids, A., 54.

Pollak, J., and Riesz, E., hydroxythiophenols. I., A., 60. sulphur dyes. III. Hydroxythiophenols. II., A., 1460.

Pollak, L., mechanism of alimentary hyperglycemia. I. Influence of ergotamine and atropine on the course of alimentary hyperglycæmia. II. Liberation of insulin by administration of dextrose and its influence on the glycæmic reaction, A., 596.

Pollak, R. See Schuloff, R.

Pollard, A. See Baker, W.

Pollard, A. G., and Whincop, J. R., manufacture of cellulose from vegetable fibres, (P.), B., 810.

Pollard, F. H. See McBain, J. W.

Pollatschek, H., temperature at the liquid-solid interface during the crystallisation of supercooled substances, A., 1002.

Poller, K. See Ackermann, D. Pollett, W. F. O., and Drakeley, T. J., china clays as rubbercompounding ingredients, B., 692.
Pollett, W. F. O. See also Drakeley, T. J.

Pollinger, A. See Willstätter, R. Pollitzer, F. See Krant, H.

Pollock, R. N. See Brown, R. L.

Pollock, R. T., and Universal Oil Products Co., cracking of oil, (P.), B., 234.

treating [cracking hydrocarbon] oils, (P.), B., 508. treatment of [hydrocarbon] oils, (P.), B., 803.

Pollopas, Ltd., Baly, E. C. C., and Baly, E. J., obtaining condensation products of formaldehyde and urea, (P.), B., 138. Pollopas, Ltd., and Spencer, G., dyeing and printing, (P.), B., 127.

Polonovski, Max, and Polonovski, Michel, 3-chlorotropan; tho non-existence of the bellatropine of Hesse, A., 335.

amine oxides of hydrastine and narcotine, A., 335.

belladonnine, bellatropine, and chlorotropan, A., 830. nomenclature of alkaloids and alkaloidal derivatives, A., 944.

Polonovski, Michel, and Boulanger, P., ammonia coefficient of urine and its dependence on various sources of nitrogen, A., 343.

urinary elimination of ammonia in relation to different nitrogenous diets, A., 593.

Polonovski, Michel, and Hazard, R., comparative cardiovascular action of two stereoisomerides, tropanol and \(\psi\)-tropanol, A.,

Polonovski, Michel. See also Hazard, R., and Polonovski, Max. Polvani, G., new quantum theory of the ideal monatomic gas and Avogadro's law, A., 1125. Polyanski, V. V. See Rakovski, A. V.

Polysius, G., vertical rotary retort for low-temperature carbonisation, (P.), B., 232.

production of fused cement in rotating kilns, (P.), B., 248.

Polysius, G. See also Ihlefeldt, J., and Luther, F.

Pomey, J., and Vonlet, P., ternary chromium steels, B., 131. Pomilio, U., regeneration and use of cellulose liquors, B., 125. Pomosin-Werke Ges.m.b.H., removal of substances producing

turbidity from pectin solutions [e.g., fruit juice], (P.), B., 536. Pomp, A., and Knackstedt, W., mechanical properties of steel wire drawn at high temperatures in relation to the degree of reduction, the temperature of drawing, and the carbon content, B.,

Pondal, I. P., nontronite from Chenlo, Pontevedra, A., 1418.
pyrites of Galicia; pyrites from La Mañoda, Santiago, A., 1418.

iodine content of the principal marine algae of the coasts of

Galicia, A., 1498. Pondal, I. P., and Vázquez-Garriga, J., tungsten-bearing minerals of Galicia. I. Analysis of wolframites from La Brea, Corpiño,

and Carboeiro, Pontevedra, A., 1418. Ponder, E. See Kermack, W. O.

Pongratz, A., perylene and its derivatives. XXIV., A., 929.

Pongratz, A., and Bensa, F., manufacture of cyanides [nitriles] of the perylene series, (P.), B., 48\*. manufacture of [perylene] dyes, (P.), B., 846\*.

Pongratz, A., and Griengl, F., perylene and its derivatives. XXVI. Heats of combustion of perylene and its derivatives, A., 1387. Pongratz, A., and Pöchmüller, E., perylene and its derivatives. XXI., A., 567.

Pongratz, A., Zinke, A., and Bensa, F., quantitative halogenisation of perylene and its derivatives, (P.), B., 201\*.

Pongratz,  $\hat{A}$ . See also Zinke, A.

Ponndorf, W., and Knipping, H. W., sorption of vapours from circulating gas by solid absorbents and the adaptation of activated charcoal and silica gel to the determination of small quantities of vapours in exhaled breath, A., 1376.

Ponsaerts, E., radio-chemical synthesis of ammonia, A., 777. Ponte, A., determination of the volatile acids in tannin baths,

B., 368. action of sodium chloride on hides and on animal tissues,

Ponte, M., diffraction of electrons by crystalline powders; electronic analysis, A., 367.

electronic analysis; structure of oxides of magnesium, zinc, and cadmium; Louis de Broglie's law, A., 494.

Ponte, M., and Rocard, Y., possible rôle of diffusion by electrons in the propagation of short waves, A., 7.

Raman effect in the X-ray region, A., 11. Pontillon, C., resins of Aspergillus niger, A., 356.

coloration of Aspergillus niger grown on fatty media, A., 724. Pontoppidan, C., hydraulic cement, (P.), B., 942\*

Pontoppidan, C., and Smidth & Co., F. L., [quick-setting] hydraulic cement, (P.), B., 816.

Ponzio, G., dioximes, A., 1072, 1446.

Ponzio, G., and Milone, M., dioximes. LI., A., 334.

Ponzio, G., and Torres, M., dioximes. LIV., A., 1316.

Pool, M. L., measurement of the life of the metastable mercury atom, A., 230.

Poole, H. H. See Atkins, W. R. G.

Poole, J. H. J., average life period of an atom, A., 117.

electronic charge e, A., 484. Pooler, L. G., velocity of sound in liquids, A., 1371.

Pope, J. C., Dykstra, F. J., and Edgar, G., vapour-phase exidation of isomeric octanes. I. n-Octane, A., 906.

vapour-phase oxidation of isomeric octanes. II. Octanes with branched chains. III. Effect of lead tetraethyl; relation of oxidation to engine detonation, A., 1036.

Pope, P. C., apparatus for low-temperature carbonisation, (P.) B., 464.

Pope, W. J., and British Drug Houses, Ltd., manufacture of anæsthetics, benzamine borate, and pharmaceutical products, (P.), B., 73\*

Popesco, A. See Ionesco-Matiu, A. Popesco, M. See Simici, D.

Popescu, H. See Popoviciu, G. Popov,  $L.\ I.$  See Volf,  $F.\ F.$ 

Popov, M., and Bayerische Stickstoff Werke A.-G., stimulating the germination of seeds and other vegetable matter, (P.), B., 448.

Popov, P. G., displacement of cadmium from its solutions by aluminium, A., 1250.

Popov, S., Jones, (Miss) M., Tucker, C., and Becker, W. W., iodometry. III. Copper as a standard in iodometry, A., 784. Popov, S., and Kunz, A. H., oxidation-reduction potentials. I. Ferric-ferrous [iron] electrode, A., 513.

iodometry. IV. Potassium permanganate as a standard in iodometry, A., 784.

Popovici, L. See Bougault, J. Popoviciu, G., and Popesou, H., chemistry of over-ventilation, A., 949.

Popp, M., tobacco products poor in nicotine, B., 188.

Popper, H., and Wozasek, O., glycogen content of the liver of cadavers, A., 1479.

Popper, L., and Weiss, S., detection of nitrite in urine, A., 593. Popperman, J. See Hager, L.

Popplewell, A. See Etchells, H.

Porai-Koshitz, A. E., dyeing wool with direct cotton dyes, B., 1012. Poreher, C., influence of acidity on the coagulation of milk, B., 1029.

Porcher, C., and Brigando, J., analytical differences between acid and rennet caseins, B., 621.

Porritt, B. D. See Fry, J. D.

Porrvik, G., hydration, paper-formation, and strength, B., 638,

Port, J., rate of decay in the Balmer series, A., 2. Portail, F. C. F., and Société Anonyme le Carbone, galvanic battery, (P.), B., 859. Portall, M. R. See Appleyard, K. C.

Porter, A. B., and Cresswick, J. A., causes and prevention of hydrogen sulphide in abattoir sewage, B., 114. Porter, A. W., surface tension, A., 492.

abnormal broadening of spectral lines, A., 967. surface tension. IV. Mechanics of drops pendant from cylindrical tubes, A., 1366.

Porter, C. R. See Drew, H. D. K. Porter, C. W. See Ramsperger, H. C.

Porter, H. F., magnetic alloys, (P.), B., 134.

Porter, J., electrodeposition of rubber, (P.), B., 485.

Porter, M. W., [optical properties of] potassium, rubidium, cæsium, ammonium, and thallium tartrates, A., 981. Porter, P. K. See Marvel, C. S.

Porteus, G., apparatus or mills for treating or grinding malt, (P.), B., 534.

Portevin, A., action of sulphurous gases at high temperatures on basic glasses and rocks and a probable origin of sulphated thermal waters, A., 168.

hot tests on metals and alloys by compression and rolling, B., 1045.

Portevin, A., and Chevenard, P., influence of fineness of structure on the annealing of grey cast iron, B., 1045.

Portevin, A., and Le Chatelier, F., compression and drawing tests on hot metals and alloys, B., 778.

Portevin, A., and Pretet, E., rate of corrosion of magnesium and ultra-light alloys, B., 780.

Portevin, A. See also Chevenard, P.

Portham, R. S., and Tangential Dryers, Ltd., removal or separation from gaseous fluid of material suspended therein, (P.), B., 500.

Portillo, R., tetrathionates. I. Barium tetrathionate, A., 778. strontium thiosulphate, A., 778.

tetrathionates. II. Strontium tetrathionate, A., 896.

Portis, S. A., digestion of lecithin by pancreatic enzymes, A., 603.

Portnov, A., use of vanillin as an alkaloidal reagent, A., 832 extraction of strychnine in forensic investigations, A., 1488 Porzel, J., device for controlling electrolytic operations, (P.), B., 362.

Poschenrieder, H. See Niklas, H. Posdeev, A. See Glassmann, B.

Pose, H., diffusion of slow-moving electrons in the inert gases, A., 231.

detection of atomic disintegration of aluminium by means of the Hoffmann electrometer, A., 971.

Pose, H. See also Hoffmann, G.

Posega, R. See Spath, E. Posegal, V., fluorescence of benzene and its infra-red absorption, A., 120.

fluorescence and infra-red absorption, A., 975.

Posner, E., determination of hydrocarbon vapours in air by active carbon, B., 7.
Posner, T., Zimmermann, W., and Kautz, S., indigotin group.

VIII. Complex reaction products from indigotin and benzoyl chloride, A., 1313.

Posnjak, E., lattice dimensions of spinel (MgAl<sub>2</sub>O<sub>4</sub>), A., 125. Posnjak, E., and Tunell, G., system cupric oxide-sulphur trioxidewater, A., 884.

Pospelov, S. See Wichert, M.

Pospiech, F. See Sajitz, R.

Pospišil, V., deduction of Einstein's formula for the Brownian movement from impulses of molecular collisions, A., 508.

Possanner, von, wood cooking with magnesium bisulphite solution, B., 1009.

Post, H. W. See Riegel, E. R.

Postel, C., and American Shale Reduction Co., distillation of solid carbonaceous material, (P.), B., 705.

Posternak, S., new organic phosphorus constituent of erythrocytes, A., 206.

Posternak, S., and Posternak, T., configuration of inactive inositol, A., 807.

manufacture of iron compounds of the phosphorus-containing bodies of egg-yolk proteins, (P.), B., 71.

Posternak, T. See Posternak, S.

Postnikoff, A. A., and Pickersgill, W. R. A., devices for attaining a uniform temperature throughout the length of chilling rolls of margarine-making machines or the like, (P.), B., 226. Postovskaja, E. A. See Rodionov, V. M.

Postovski, I. J., tautomerism of o-nitrobenzaldehyde, A., 1449. Postovski, I. J., and Lugovkin, B. P., action of aluminium chloride and metallic aluminium on hydroxylio compounds, A., 925.

Postovski, Y., primary tar of Chelyaba coals. I., B., 763. Postovski, Y., and Peretz, B. G., wood tar. I., B., 704. Postovski, Y., and Plusnin, V. G., turpentine obtained as byproduct in the manufacture of collulose by the sulphate method. I., B., 773.

Postum Co., Inc., treating cocoa beans to obtain food products therefrom, (P.), B., 868.

Poth, E. J., receiver for vacuum distillation, A., 672.

Potozky, A., and Zogline, I., mitogenetic radiation of blood, A., 1327.

Potter, F. M. See Gas Light & Coke Co.
Potter, G. J. C. See Hill, H. S.
Potter, H. H., X-ray structure and magnetic properties of single crystals of Heusler alloy, A., 494.

Potter, T. W., McNamara, L. C., Lammers, C. N., McLavy, J. R., and Journal-Box Servicing Corporation, renovation of journalbox oil, (P.), B., 509.

Potter, Boardman & Co., Ltd., and Hamilton, P., manufacture of tracing cloth, (P.), B., 1042

Potterton, A. B., Potterton, T. F. C., and Potterton, Ltd., T., thermostats, (P.), B., 1000.

Potterton, T. F. C. See Potterton, A. B.

Potterton, Ltd., T. See Potterton, A. B.

Potts, C. See Wigley, C. G.

Potts, H. R., converting low-grade [copper] matte at Rio Tinto,

B., 982.

Pouchain, A., negative electrode for electric accumulators, (P.). B., 101.

[acid electrolyte for] zinc-lead electric accumulator, (P.), B., 217.

negative electrode for zinc electric accumulators, (P.), B., 362. lead electrode for electric accumulators, (P.), B., 362.

Poulter, T. C., and Frazer, G. E., rate of dissolution of zinc in sulphuric acid under pressure, A., 150.

Poulter, T. C. See also Bartlett, R.

Poupko, S. See Khotinsky, E. Povarnin, G., tanning of hides, (P.), B., 568.

Poverud, G. M. See Sonsthagen, A.

Powell, A. R., determination of naphthalene [in gas] by picric acid, B., 310.

Powell, A. R., Deering, E. C., and Johnson, Matthey & Co., Ltd., treatment of ores, metallurgical products, residues, etc. for the recovery of precious metals, (P.), B., 822.

Powell, C. F. See Tyndall, A. M. Powell, G., mechanism of the azide rearrangement, A., 1176.

Powell, J. R., and Armour & Co., means for separating solids from liquids, (P.), B., 1036.

Powell, R. E., and Standard Oil Development Co., reclaiming [lubricating oil] distillation residues, (P.), B., 234.

Powell-Brett, B., liquid fuel burners, (P.), B., 746.

Power-Gas Corporation, Ltd., and Rambush, N. E., charging furnaces [water-gas generators] with solid material, (P.), B., 199.

Power Speciality Co., fractionating tower; bubble still trays for fractionating towers, (P.), B., 80.

Power Specialty Co. See also Dowd, W. E., jun. Powers, D. H., and Du Pont de Nemours & Co., E. I., rubber

vulcanisation accelerator, (P.), B., 30. Powers, E. B., apparatus for colorimetric titration, A., 41. Powers, E. B., and Hickman, T. A., carbon dioxide tension of the

Fraser River and its lower tributaries and of certain tributaries of the Columbia River, B., 304.

Poznański, S., esterification equilibrium and active molecules, A., 1009.

Poznański, S. See also Swientoslawski, W. Pozniakov, N. See De Procoudine-Gorsky, S.

Prager, W., analysis of glycerin according to the I.S.M. 1911, B., 121.

Prahl, W. See Raschig, F

Prakash, S., and Dhar, N. R., changes in the viscosity and hydrogen-ion concentration of some inorganic substances during the process of jelly formation, A., 1008.

preparation of jellies of some inorganic substances, A., 1235.

Prakash, S. Sec also Dhar, N. R. Prandtl, W., and Sennewald, K., trichloronitrosomethane, dichloroformoxime (phosgene oxime), and their derivatives, A., 1037.

Prange, G. See Rath, C.

Pranschke, A. See Fischer, F.

Prasad, M., and Hattiangadi, R. R., silicic acid gels. I. Time of setting of gels, A., 1235.

Prasad, M. See also Boohariwalla, D.

Prat, G.J. See De Beavais, G.M.G.Prat, S., biological reactions on the concentration of gels, A., 354. Pratesi, P. See Scagliarini, G.

Prather, G. W., preparation of water-softening material, (P.), B., 874.

Pratt, D. D. See Morgan, G. T.

Pratt, W. L. C. See Bennett, G. M.

Prausnitz, P. H., extraction apparatus and "perforators" for liquid extraction, A., 672.

explosive gas mixtures, B., 421. Pray, H. A. H. See Jacobson, C. A.

Prechtl, E., effect of antiseptics on the action of salivary diastase, A., 1106.

Precious Metal Industries, Ltd. See Gates-Warren, A. I.

Predvoditelev, A., absolute velocity of a water molecule emitted on the dehydration of a crystalline hydrate. II., A., 21, 629. Pregl, F., and Soltys, A., micro-determination of the acetyl value, A., 337.

Preininger, V., determination and nature of the alkalinity of raw [beet] sugars, B., 790.

Preisler, P., range of fluctuations of a-rays, A., 406. Preisler, P. W. See Hall, W. L. Prelog, V. See Lukeš, R., and Votoček, E.

Prem, M. See Vanino, L.

Prentice, T. K., production of platinum concentrates from Transvaal ores, B., 820.

Prentice, T. K., and Murdoch, R., recovery of platinum from dunite rock at Onverwacht, Transvaal, B., 359.

Prentiss, S. W., reactivity of atoms and groups in organic compounds. IX. Vapour pressures, densities, and refractive indices of binary mixtures, A., 1228.

Prentiss, S. W. See also Norris, J. F.

Preobraschenski, A. M., influence of substances of the pilocarpine group on the gaseous exchanges of animals, A., 600.

Preobraschenski, N. A. See Magidson, O. Y. Préparation Industrielle des Combustibles Société Anonyme,

device for washing coal or other minerals, (P.), B., 314. Prescher, J., content of alcohol-soluble material in cinnamon, B., 376.

Prescott, C. H., jun., apparatus for micro-gas analysis, A., 166. Prescott, C. H., jun., and Hincke, W. B., equilibrium between aluminium carbide and nitrogen at high temperatures, A.,

**Press**, A., the general thermodynamical integrating factor of the entropy function, A., 1238.

Pressler, A. E. M. See Pressler, E. G. O.

Pressler, E. G. O., Pressler, A. E. M., and Pressler, K. E. H.,
("Otto Pressler" Thüringer Vakuumröhrenfabr. & Fabr. wiss. Apparate), [arrangement of parts in] photo-electric cells, (P.), B., 946.

Pressler, K. E. H. See Pressler, E. G. O. Preston, F. W., fracture systems of glass, B., 434.

Le Chatelier's equation for viscosity of glass, B., 473.

Preston, G. D. See Gayler, M. L. V

Preston, L. R., solder for aluminium or its alloys, (P.), B., 526\*.

Preston, M. See Shattuck, H. F. Preston, W. C., and Richardson, A. S., surface properties of soap solutions, A., 1001.

Pretet, E. See Portevin, A. Prétot, M., and Ullmann, F., removal of solid particles from flue gases, (P.), B., 269. Pretschner, F. See Schmidt, H. H.

Prettre, M., and Laffitte, P., ignition temperature of mixtures of hydrogen and air, A., 33.

ignition temperature of combustible gaseous mixtures, A., 271. ignition temperatures of mixtures of carbon monoxide and air, A., 771.

Pretty, W. E., pressure shift in the spectrum of ionised nitrogen, A., 1205.

Preuss, L. M., Peterson, W. H., and Fred, E. B., gas production in the making of sauerkraut, B., 35. Preusze, K. H. See Ditmar, R.

Prevet, F., influence of boric acid on the phosphorescence of zinc sulphides prepared by the explosion method, A., 489. Prevet, F. See also Constal, R.

Prévost, C., interaction of  $\Delta\beta$ -pentenyl bromide and magnesium ethyl bromide, A., 46.

new tautomeric phenomena in the allylic series, A., 170. allyl transformations and additive compounds of erythrenic

hydrocarbons. III., A., 169. Prianischnikov, A. See Longinov, V.

Prianischnikov, D. N., nutrition of higher plants with ammonia,

value of peat as a material for the preparation of composts and

peat manure, B., 410. Prianischnikov, N. D., and Telnov, S. M., determination of water and fats in materials rich in fats, B., 253.

Price, G. B., and Quirk, Barton & Co., Ltd., production of lead oxide, (P.), B., 718.

Price, H. I., and Lewis, W. C. M., physico-chemical behaviour of lecithin. I. Capillary activity of lecithin as a function of рн, А., 1380.

Price, H. T., manufacture of pulp board, (P.), B., 168.

Price, I. See Horton, K.

Price, L. S. See Taylor, T. W. J.

Price, M. S., [rotary] kiln, (P.), B., 875.

Price, R. C., Cooper, H. S., and Beryllium Corporation of America, manufacture of beryllium oxide, (P.), B., 556.

Price, W. B., and Smiles, S., o-sulphinobenzoio acid, A., 62. hydroxy-derivatives of thioxanthone dioxide, A., 193,

Price, W. J. See Jones, C. W. H.
Prickett, P. S., thermophilic and thermoduric micro-organisms with special reference to species isolated from milk. scription of spore-forming types, B., 338.

Pride, W. E. See Hunter, R. F.

Prideanx, E. B. R., diffusion and membrane potentials. IV. Comparison of anion and cation effects, A., 134.

Prideaux, E. R. B., and Millott, J. N., activity of hydrogen ion in concentrated hydrofluoric acid, A., 1386.

Pries, P. See Diels, O. Priest, I. G., Judd, D. B., Gibson, K. S., and Walker, G. K., calibration of sixty-five 35-yellow Lovibond glasses, A., 671.

Priester, R. See Waterman, H. I.
Priestley, E. See Lloyd, L. L.
Priewe, H. See Chem. Fabr. auf Aktien (vorm. E. Schering). Prikladovitzki, S. I., cause of death of animals with pancreatic fistula, A., 595.

Prikladovitzki, S. I., and Brestkin, M. P., secretions of digestive glands and blood chemistry. I. Alkali reserve and chlorides in blood, A., 214.

Prileschaev, N., and Verschuk, V., a-pinene oxide in Grignard's reaction, A., 1076. Prillwitz, R. See Brahm, C.

Primrose, J., and Foster Wheeler Corporation, apparatus for refining oils, (P.), B., 197.

fractional distillation [of hydrocarbon oils], (P.), B., 745.

Primrose, J. S. G., high-speed steel, B., 21.

Prince, G. W., and United Verde Extension Mining Co., smelting of ores in reverberatory furnaces, (P.), B., 328.

Prince, N. F., removal of organic sulphur from gas, B., 310. Princivalle, E. See Gastaldi, C.

Prindle, R. B. See Brit. Thomson-Houston Co., Ltd.

Pring, M. E., and Spencer, J. F., electrometric determination of copper. I. Müller and Rudolph's method. II. Application of Volhard's method to electrometric analysis, A., 1259.

Pringsheim, H., and Fordyce, C. R., structural matter of varieties of cabbage. II., B., 468.

Pringsheim, H., Reilly, J., and Donovan, P. P., inulin. VIII., A., 1282.

Pringsheim, H., and Steingroever, A., starch. XXII. Amylose and amylopectin, A., 798.

Pringsheim, H., and Thilo, E., separation of the enzymes of barley malt. III. Amylase and maltase, A., 352.

Pringsheim, H. See also Irvine, (Sir) J. C.

Pringsheim, P., and Yost, M., Raman effect of some aqueous solutions, A., 1362.

Pringsheim, P. See also Carrelli, A., Klumb, H., and Orthmann, W. Prins, J. A., diffraction of X-rays in liquids containing heavy atoms, A., 125.

X-ray evidence for intermolecular forces in liquids, A., 746. diffraction of X-rays in liquids and solutions,  $A_{ij}$ , 1132.

Prior, A. C., agitators or mixing devices; [fuel burners], (P.), B., 509.

Prior, G. T., meteoric stone of Lake Brown, Western Australia, A., 1263.

Pritchard, D. A., and United Alkali Co., Ltd., treatment of caustic solutions for the production of solutions and of solid caustic soda of a high degree of purity, (P.), B., 16.

Pritchard, P. See Pneulec, Ltd. Pritchard, R. L., process and apparatus for degumming, washing, and drying of fibres (P.), B., 976. Pritchard, W. S. See Grossman, H. Pritchett, E. G. K. See Friend, J. A. N.

Pritham, H. C., [pyrotechnic] tracer compositions, (P.), B., 539. Pritzker, J., and Jungkunz, R., apparatus for the determination of water by the distillation method, A., 1029. lemon oil, B., 112.

goose-liver preparations, B., 575. examination of marzipan, B., 621.

quantitative aspects of the Kreis rancidity reaction [for fats], B., 923.

determination and content of water in dried fruit, B., 955.

Prizemina, S. P. See Lischkevitsch, M. J.

Probst. See Petow, H.

Probst, J., preparation of hypophosphoric acid by the action of hypochlorite on red phosphorus, A., 525. Procédés R. Berthon. See Soc. Franç. Cinéchromatique.

Prochaska, F. J. See Adolph, W. H.

Prochazka, J., treatment of beets by De Vecchis' process, B., 617. Prochownick, V. See Schlubach, H. H.

Prociv, D., formation of acid lithium aluminate, A., 409. Proctor, R. F., and Douglas, R. W., measurement of viscosity of

glass at high temperatures by the rotating-cylinder viscosimeter, B., 851.

Proctor, W. H. W. See Kluijtmans, C. E. Prodinger, W. See Dworzak, R.

"Prodor" Fabrique de Produits Organiques Société Anonyme. See Lévy, Marcel.

Prodorite, Ltd. See Fender, H. W.

Progrès Minier & Métallurgique Société Anonyme, and De Samsonov, A., apparatus for agglomerating and roasting minerals, (P.), B., 58.

"Progress" Ges. für Textilmaschinen m.b.H. See Werner, K. Proisl, J. See Abel, E. Prokoflev, V., probability of the forbidden s,d switch in the alkali

metals, A., 1205. calculation of the number of dispersion centres in sodium, A., 1365.

Prokoflev, V. See also Filippov, A. Prokoptschuk, N. See Rntovski, B.

Proniewski, G., ebullioscopic researches on mixtures of salt solutions, A., 504.

Prosad, K., vacuum arc lamp for spectroscopic work, A., 534. Prosad, S. See Cruickshank, E. W. H.

Proschko, F., and Esseff Chem. Ind. & Handels-Akt.-Ges., manufacture of double salts of carboxylic acids of aromatic sulphonic halogen-alkali-amides, (P.), B., 227\*. Proskouriakoff, K., oxidation of halogen acids by sulphuric acid,

A., 780.

Proskurnin, M. See Sagulin, A. B. Proskurnina, N. F. See Stadnikov, G. L.

Prot. See Aubert.

Prouty, C. C., use of dyes in the isolation of a nitrite-oxidising organism, B., 831.

Prouty, W. O., and American Encaustic Tiling Co., Ltd., ceramicglazing process, (P.), B., 247.

Provan, A. L., colostrum, A., 953.

Provan, A. L. See also Davies, R. O.

Prowse, F. J., Robinson, R. D., Hall, E. M., Fleming, C. F., and California Packing Corporation, controlling the sulphur dioxide content of dried fruit, (P.), B., 868.

Prudhomme, E. A., hydrogenation of naphthalene, (P.), B.,

Prudhomme, E. A., and Société Internationale des Procédés Prudhomme (S.I.P.P.), manufacture of synthetic liquid fuels, (P.), B., 548\*.

manufacture of carburetting liquids similar to petrol, (P.),

B., 933\*.

Prüss, M., [purification from phenol of] effluents from coke ovens, B., 1038.

"Prufix," Ltd. See Moreton, C.J.

Pryce, L., hollow drill steel, (P.), B., 59. Pryde, J., and Waters, E. T., nature of the sugar residue in the hexosemonophosphoric acid of muscle, A., 952. Prytherch, W. E. See Rosenhain, W.

Prytz, M., hydrolysis in solutions of beryllium salts, A., 883.

Przibram, K., blue rock salt, A., 233.

Przyłecki, S. J., reaction kinetics in the macroheterogeneous medium, A., 602.

influence of structure on the kinetics of desmolases. II. Uricase; systems uricase-uric acid-liver and kidney pulp, A., 603.

Pschorr, R. See Avenarius, H.

Pù. See Enderlen, E

Pucher, G. W. See Vickery, H. B.

Püngel, W., and Vereiniste Stahlwerke A.-G., improving the strength qualities of steel wire, (P.), B., 1020\*.

Puening, F., distilling carbonaceous materials, (P.), B., 311, 423,

manufacture of coke, (P.), B., 312.

Pürchkauer, R. See Niklas, H.

Pugh, C. E. M., activation of certain oxidase preparations, A., 847.

Pugh, E. M., Hall effect and magnetic induction in a bar of electrolytic iron, A., 126 Pugh, W., germanium. IV. Solubility of germanium dioxide in

acids and alkalis, A., 997.

germanium. V. Hydrolysis of sodium germanate and the dissociation constants of germanic acid, A., 1237.

Pugsley, L. I. See McKibbln, R. R. Pugsley, T. M., manufacture of hollow drill steel in the electric furnace, B., 285.

Pulewka, P., keratolysis, A., 591.

Pulkki, L. See Virtanen, A. I.

Pulp Binders Development Co., Ltd. See Carpenter, S. W. Pulsometer Engineering Co., Ltd., and Björnstad, J., plant for

dealing with sewage, (P.), B., 418.

Pulvo, Ltd., Bolton, W. F., and Read, C. V. B., preservation of eggs for the use of bakers and confectioners, (P.), B., 226. Pummerer, R., rubber and its fractions, B., 611.

Pummerer, R., Andriessen, A., and Gündel, W., cryoscopic measurements with caoutchouc solutions and the separation of mixed phases from solutions of caoutchoue in benzene. IX., A., 1455.

Pummerer, R., and Kranz, H., n-hentriacontene, A., 1420. Pummerer, R., and Mann, F. J., iodine and oxygen values of sol

and gel caoutchoue, A., 1455.

Pummerer, R., Rebmann, L., and Reindel, W., carotinoids. II. Determination of the degree of unsaturation of polyenes by iodine chloride and perbenzoic acid, A., 906.

Pungs, W. See I. G. Farbenind. A.-G.

Punzalan, E. See Locsin, C. L. Pupko, S. L., coagulation of hæmoglobin. I., A., 1382.

Purakayastha, R. M., induction period and after-effect in photo-

chemical reactions, A., 277. extinction coefficient of Br<sub>3</sub>' ions and its function in photochemical reactions, A., 1022.

oxidation of some hydroxy-acids by bromine. I. The light reaction. II. The dark reaction, A., 1024.

Purcell, R. H., and De Lange, W., vapour density and pressure of ammonium iodide, A., 387.

Pure Oil Co. See Carr, R. H. Puri, A. N., hypothesis of "unfree water" in soils, B., 1026. dispersing soils for mechanical analysis, B., 1026.

Purks, H. See Davis, B. Purr, A. See Waldschmidt-Leitz, E.

Purves, C. B. See Phelps, F. P. Purvis, J. E., oxidation of sewage when hard or soft waters are the carriers, B., 836.

Pushin, N. A., and Pinter, T., viscosity of binary systems with guaiacol as a component, A., 994.

Puterbaugh, M. See Ehrenfeld, L.

Putjata, E. See Petrenko-Kritschenko, P.

Putnoky, L. von, and Szelény, G. von, adsorption of gaseous mixtures of alcohol and ether from air by different silica gels, A., 132. Putochin, N. J., derivatives of isatin; a new example of isomerism, A., 74.

[preparation of] diamines and amino-alcohols, A., 1168.

Putsch, A., and Koppers Co., coke oven, (P.), B., 422. Putschkovski, B. S. See Dumanski, A. V.

Putt, E. B., finely-divided phenolphthalein and its manufacture.

(P.), B., 352. Puxeddu, E., amino-derivatives of hydroxybenzoic acids, A., 555.

constitution of isoborneol, A., 570. photochemical decomposition of solutions of metallic salts in organic solvents, A., 659.

reduction of esters of benzeneazohydroxybenzoic acids, A., 804. Puxeddu, E., and Sanna, G., derivatives of 6-amino-3-hydroxy-

benzoic acid, A., 1295. ketophenmorpholine synthesis from 5-aminocugenol, A., 1317.

Pyhälä, E., hardening and esterification of rosin, B., 64. significance of "white [petroleum] oil" in the varnish industry, B., 137.

"gum-running," B., 365.

properties of current Finnish turpentine oil, B., 948.

Pyl, G. See Hoth, W.

Pyman, F. L. See Bryans, F., and Child, R.

Pyne, G. T., action of viscogen (calcium saccharate) on milk and cream, B., 735.

Pyridium Corporation, preparation of arylazodiaminopyridines, (P.), B., 538\*.

Pyridium Corporation. See also Ostromislensky, I.

Pyzel, D., and Simplex Refining Co., utilisation of carbonaceous material, (P.), B., 384.

Quaedvlieg, M. See Lipp, P. Quagliariello, G., mechanism of lymph-formation, A., 715. sodium, potassium, calcium, and magnesium in muscle fluid and its ultra-filtrate, A., 1329. Quaker Oats Co. See Trickey, J. P.

Quam, G. N., solubility of metals in milk, B., 686.

Quam,  $G.\ N.$  See also Soloman,  $E.\ J.$  Quarder, B. See Hanle, W.

Quartaroli, A., determination of the  $p_{\rm H}$  of wines, B., 793. Quarto, A. See De Conno, E.

Quartz & Silice, manufacture of plate glass and sheet glass for window panes from pure fused transparent silica, (P.), B., 598. Quartz & Silice. See also La Burthe,  $\hat{P}$ . H. C.

Quarzlampen-Ges.m.b.H., [ultra-violet] irradiation of substances [liquids or gases], (P.), B., 727.
Quasebarth, K. See Asada, T.

Quasi-Arc Co., Ltd., and Strohmenger, A. P., electrodes for use

in electric arc-welding, (P.), B., 527. Quast, A. See Ostwald, Wolfgang. Quastel, J. H., resting bacteria, A., 355.

Quastel, J. H., and Wooldridge, W. R., reduction potential, energy exchange, and cell growth; experiments with B. coli, A., 355. Qudrat-i-Khuda, M., keto-lactol tautomerism. I. Ring-chain tautomerism in a-carboxy- $\gamma$ -acetyl- $\beta\beta$ -dimethylbutyric acid and a synthesis of  $\gamma$ -acetyl- $\beta\beta$ -dimethylbutyric acid, A.,

keto-lactol tautomerism. II. Influence of the cyclohexanc ring on the tautomeric character of cyclohexane-1-acetone-1-malonic acid, a comparison with cyclopentane-1-acetone-1-malonic acid, and synthesis of the corresponding δ-ketomonobasic acids, A., 698.

keto-lactol tautomerism. III. Influence of bulky substituents on the tautomerism of a-carboxy- $\gamma$ -acetyl- $\beta$ -methyl- $\beta$ -ethyland - $\beta\beta$ -diethyl-butyric acids, A., 1273.

Quelet, R., p-bromoethylenic benzenes and their magnesium

organo-derivatives. I. and II., A., 434, 802.

Queneau, A. L. J., production of zinc, (P.), B., 857.

Quency, P., spectra of phosphorus and arsenic in the extreme ultra-violet; multiplets of As IV and As v, A., 965. spectrum of phosphorus in the extreme ultra-violet, A., 1200.

Querberitz, F. See Rieche, A. Querengässer, H., electrical conductivity of vapours of salts,

A., 634, 990.

Querengasser, H. See also Krauss, F. Quick, A. J., \(\beta\)-oxidation. II. Metabolism of phenyl-substituted acids and of acetophenono in dogs. IV. Metabolism of conjugated glycuronic acids, A., 211.

Quick, A. J. See also Sweet, J. E. Quiggin, D. A., brine evaporation; [tube] evaporators; condensers, coolers, or like apparatus having tubular heat-exchang-

ing surfaces, (P.), B., 452 Quiggle, D. Sec Frolich, P. K.

Quilico, A., alums of organic bases. I. Alums of methylamine, A., 125.

Quilico, A., and Fleischner, E., coupling of diazonium salts in the side-chains of unsaturated compounds. II., A., 559.

Quilico, A., and Freri, M., action of nitrosodimethylaniline on apiole, A., 1178.

Quill, L. L., and Selwood, P. W., electrode holder for are spectrum analysis, A., 1160.

Quill, L. L., and Selwood, P. W. [with Hopkins, B. S.], rare earths. XXX. Absorption spectra studies, A., 119.

Quill,  $L.\ L.$  See also Kremers,  $H.\ C.$ 

Quillard, and Bascou, corrosion of aluminium alloys, B., 477.

Quin, J. P. See Mackenzie, J. E. Quinet, R. I. See Fabian, F. W.

Quinn, E. L., and Wernlmont, G., densities of oo-existing liquid and gaseous nitrous oxide, A., 993.

Quinney,  $H_{\bullet}$ , comparison between behaviour at the Ac3 point of single-crystal iron and polycrystal iron, both in the strained and unstrained state, B., 720.

Quirk, R. F. See Wightman, E. P.

Quirk, Barton & Co., Ltd. See Price, G. B.

Quittner, F., dependence of electrical ionic conductivity of single crystals on field strength, A., 1135.

Quittner, F, and Smekal, A, experiments on the conductivity of ionic crystals; effect of tempering, treatment with water, and plasticising, A., 753.

Qvist, W., chlorination of p-cymenc, A., 179. Qvist, W. [with Sahlberg, U., and Jansson, O.], chlorine additive products of toluene, A., 687.

Raalf, H. See Levy, P.

Raalte, A. van, luminescence of fats and oils, (P.), B., 63\*.

f. p. of milk, B., 492.

fats, B., 986.

Raaschou-Nielsen, H. L., freezing or cooling fish and other articles of food, (P.), B., 338.

Raaz, F. See Kordes, E.

Rabas, A. See Dubsky, J. V.

Rabcewicz-Zubkowski, I., preparation of acid chlorides, A., 1270. halogen derivatives of acetophenone, A., 1299. ω-halogen derivatives of acetonaphthone, A., 1299.

Rabe, P., auxanin B [for increasing the fastness to light of basic dyes], B., 92.
Rabe, P., Wenk, B., Hartmann, E., and General Aniline Works,

Inc., molybdenum phosphotungstate compounds, (P.), B., 978\*.

Rabe, P. See also Grasselli Dyestuff Corporation.
Rabek, T., action of silent electrical discharge on mineral and vegetable oils, B., 194.

Rabi, I. I., deflexion method for molecular beams. I., A., 744.

refraction of beams of molecules, A., 380. Rabinerson, A., adsorption and volume of solution, A., 999.

Rabinovitsch, A. J., and Kargin, V. A., coagulation of colloids by electrolytes. VI. Use of the glass electrode in the potentiometric study of the coagulation process, A., 1143. Rabinovitsch, A.J. See also Petrov, G.S.

Rabinovitsch, Efraim, reduction of grain and its subsequent conversion into bread or like product, (P.), B., 956.

Rabinovitsch, Eugen. See Beutler, H.

Rabinovitsch, I. See Holde, D.

Rabinovitsch, I. M., cholesterol content of blood-plasma in diabetes mellitus, A., 595. cholesterol content of blood-plasma in juvenile diabetes,

A., 595.

acute yellow atrophy of the liver; origin of carbamide in the body. I., A., 1192.

Rabinovitsch, I. M., and Bazin, E. V., blood-sugar and respiratory metabolism following simultaneous administration of dextrose and insulin, A., 221.

Rabinovitsch, I. M., and Mills, E. S., anomalous fat metabolism in diabetes, A., 595.

Rabinovitsch, M. A., electrolytic dissociation, A., 138.

Rabinovitsch, M. A., and Fokin, A. S., electrolytic analysis of nitrates; apparatus for reduction with nascent hydrogen in presence of catalysts, A., 284. electrolytic analysis of nitrates, A., 782.

Rabinovitsch, M. A., and Fortunatov, N., approximate determination of the absolute magnitude of the pores of porous materials, B., 1.

approximate determination of the absolute size of pores, B., 191. Rabinovitsch, M. A. See also Plotnikov, V. A.

Rabinovitsch, S. origin and fate of uric acid and resorption of nucleic acid in the dog, A., 213.

Rabinovitsch, S. See also Ferber, J.
Rabl, C. R. H., calcification of organs under the influence of vitamin-D, A., 1345.

Rác, F. See Votoček, E. Race, H. H., and Campbell, J. R., jun., dielectric polarisation potential and the law of superposition for hard rubber, A., 1365.

Rachner, M. See Ditmar, R. Ractliffe, G. H. C. See Stewart, P. W. Radcliffe, R. S. See Weiser, H. B.

Radecker, W. See Sauerwald, F. Radeff, T. See Lintzel, W.

Radici, M. See Melli, G.

Radio Corporation of America. See Loewe, Siegmund, and Van Gessel, K. M.

Radio Patents Corporation. See Wien, S.

Radiotechnique Société Anonyme, electron-emitting cathodes,

(P.), B., 25.
Rado, L., composite materials containing metal foil, (P.), B., 330. embellishment and rendering waterproof of flat pieces of

material and production of articles therefrom, (P.), B., 677. Radsma, W., cholesterol content of blood of tropical inhabitants, A., 1477.

Radsma, W., and Pirngadi, Bang's method for the determination of fatty substances in blood, A., 1477.

Rădulescu, D., structure of absorption-resonators of organic chromophors. III. Phenomena of halochromism in sulphonation, A., 1213.

theory of the valency octet in the "torular" atom model.

I. –VII., A., 1218.

purification of furnace and like gases, (P.), B., 839, 876. Radulescu, D., and Barbulescu, F., structure of absorption-resonators of organic chromophors. I. Structure of absorptionresonators of halochromic complexes of quinones and quinhydrones, A., 1213.

Rădulescu, D., and Georgescu, A., structure of absorption-resonators of organic chromophors. II. Polarity of substituents as determining factor in displacement of bands, A., 1213.

Rae,  $J_{\cdot \cdot}$ , volumetric process for the determination of phenazone, B., 111.

action of peroxidase on glycerophosphates, B., 416.

salicylsulphonic acid, B., 659.

Raeder, M. G., electrically-heated thermocirculator for hot leaching and digesting, A., 672.

Raeder, M. G., and Effestad, D., hydrogen overvoltage of alloys, A., 402.

Räth, C., manufacture of 2-hydroxypyridine-5-carboxylio acid, (P.), B., 149.

preparation of a-hydrazino-β-nitropyridine, (P.), B., 1032\*. Rath, C., and Prange, G., pyridine and quinoline derivatives. III. New synthesis of 2-aminonicotinic acid and its behaviour

with nitric acid, A., 74. Räth, C. See also Binz, A., and Schering-Kahlbaum Akt.-Ges.

Raffinerie Tirlemontoise Société Anonyme, separating out the mother-liquor from crystals or crystalline bodies, (P.),

treatment of saccharate scums, (P.), B., 618.

Rafflin, E., urinary elimination of ammonia and nitrogen. II., III., and IV. Some urinary constants, A., 592.

Raffloer, E., apparatus for coking solid fuel, (P.), B., 504. coking of solid fuel, (P.), B., 803.

Ragg. M., lead soaps, B., 441.

Ragins, I. K., determination of tryptophan in proteins; rate of liberation of tryptophan by enzymes, A., 204.

Rago, D. See De'Conno, E.

Rahe, S. E., manufacture of matches, (P.), B., 998. Rai-Chaudhury, S. P. See Makherjee, J. N.

Raiford, L. C., and Birosel, D. M., steric hindrance in the behaviour of phenyl alkyl ethers and derivatives, A., 182. action of bromine on mixed ethers, A., 923

Raiford, L. C., and Bren, B. C., derivatives of 2:5-dibromonitrobenzene, A., 1172. Raiford, L. C., and Hildebrand, J. G., jun., cresyl [tolyl] esters of

phenylacetic acid, B., 805.

Raiford, L. C., and Thiessen, G., effect of substituents in the formation and reactions of certain ethers, A., 182.

Raikhinstein, T., determination of sclenium dioxide in sulphuric acid, A., 1030; B., 15.

Raikowa, T. P., stereoisomerism of oximes, A., 911.

determination of the configuration of oximes, A., 1276. distinction between American and Russian petroleums, B., 422.

Rainbow Light, Inc., and Machlett, R. R., argon-morcury discharge tubes, (P.), B., 178\* luminous electric discharge tube of high candle power, (P.),

B., 178.

Raineau, A. See Audibert, E. Raith, E., sources of error in the determination of blood-sugar by Bang's micro-method, A., 837.

Raiziss, G. W. See Fisher, B. C.

Rajet Co. See Whitney, L. F.

Raju, M. S. See Sivan, M. R. R.

Rakovski, A. V., alcoholometric tables, A., 1035.

Rakovski, A. V., and Polyanski, V. V., isodimorphism of sodium bromide and sodium chloride; preparation of pure sodium

bromide, A., 1135. Rakovski, V., and Mchl, P., decolorisation of cresols by humic acids, B., 670.

Rakovski, V. E., distillation of peat, B., 502. Rakowitzky, H. Sce Rakowitzky, S.

Rakowitzky, S., and Rakowitzky, H. (Rakowitzky Gebrüder), manufacture of [book] matches, P.), B., 379.

Rakowitzky Gebrüder. See Rakowitzky, S.

Rakshit, H. See Mitra, S. K.

Rakshit, J. N., electrical conductivity of salts of alkaloids in pure and in mixed solvents, A., 1239.

Rakuzin, M. A., animal and vegetable fats as parent substances of the inactive constituents of petroleum, B., 42.

Rakuzin, M. A., and Genke, T. A., characterisation of the proteins of blood, muscles, and internal organs of rabbits and chickens by means of colour reactions, A., 462.

effect of alkaloids on an alcoholic extract of fibrin peptone (peptic digest), A., 471.

Ralston, A. W. See Fenger, F., and Sweeney, O. R.

Ralston, O. C., iron oxide reduction equilibria from the point of view of the phase rule and thermodynamics, B., 849.

Ram, K. See Shaw, F. J. F.

Ramage, A. S., and Gyro Process Corporation, refining of mineral oil, (P.), B., 386.

production of hydrocarbons of higher b. p. from gaseous and low b. p. hydrocarbons, (P.), B., 508.

Ramage, H., spectrographic chemical analysis, A., 527.

Ramage, J. H., and Westinghonse Lamp Co., vibration- and sagresistant filament, (P.), B., 783. Raman, C. V., theory of light scattering in liquids, A., 378.

classical derivation of the Compton effect, A., 747.

diamagnetism and crystal structure, A., 871.

anomalous diamagnetism, A., 1129

Raman, C. V., and Bhagavantam, S., magnetic behaviour of organic crystals, A., 495.

relation between colour and molecular structure in organic compounds, A., 1126.

Raman, C. V., and Krishnamurti, P., new X-ray effect, A., 984. Raman, C. V., and Krishnan, K. S., rotation of molecules induced by light, A., 11.

production of new radiations by light scattering. I., A., 240. Ramanadham, M., magnetic birefringence in liquids of the aliphatic series, A., 1128.

magnetic birefringence in solutions and its relation to crystal structure and properties, A., 1223.

Ramapo Finishing Corporation. See Suffern, S. J.
Ramart, (Mme.) P., and Amagat, (Mlle.), comparison of the stability of isomerides according to their absorption spectra; allyl and isoallyl derivatives of the benzene series, A., 441.

Ramart, (Mme.) P., and Hoch, J., comparative stability of stereoisomeric ethylene derivatives and their synthesis by ultra-

violet light, A., 1447. Ramart, (Mme.) P., and Salmon-Legagneur, F., relative stability of isomerides according to absorption spectra. V. Dehydration of glycols; isomeric change of ethylene oxides, A., 815.

Ramart-Lucas. See Ramart. Rambeck, O. W. See Mignonac, G.

Ramberg, L., modern chemical balances, A., 785. crucible tongs for analytical work, A., 786.

Rambush, N. E. See Power-Gas Corp., Ltd.

Ramdohr, P., klockmannite, A., 28. Ramos, F. See Gurgel, L.

Ramsauer, C., effective cross-section of neutral molecules of gases with respect to slow electrons, A., 123.

Ramsauer, C., and Kollath, R., effective cross-section of the heavy inert gases with respect to electrons below I volt, A., 1123.

Ramsay, D. McN., distillation of carbonaceous material, (P.), B., 311.

Ramsay, H. G. A. Sec Stockholms Superfosfat Fabr. Aktiebolag. Ramsay, J. See Holmes, H. N. Ramsay, W. See Martin, F. G.

Ramsburg, C. J., and Koppers Co., gas-purification process, (P.), B., 969.

Ramsdell, L. S., X-ray study of the domeykite group, A., 1264. Ramsdell, L. S., and Partridge, E. P., crystal form of calcium sulphate, A., 988.

Ramsdell, S. G. See Brown, H.

Ramsey, G. B., and Butler, L. F., injury to onions and fruits caused by exposure to ammonia, B., 71.

Ramsperger, H. C., s-methylisopropylhydrazine and methyliso-propyldi-imide, A., 685.

thermal decomposition of methylisopropyldi-imide, a homo-

geneous unimolecular reaction; thermal decomposition of azoimide and methyl azide, A., 1018. stopcock [for vacuum work] in which contamination by grease

is prevented, and its application to a problem in gas technique, A., 1034.

Ramsperger, H. C., Nordberg, M. E., and Tolman, R. C., rate of decomposition of nitrogen pentoxide at moderately low pressures, A., 1016.

Ramsperger, H. C., and Porter, C. W., vapour density of formic acid, A., 128. Rancaño, A. Sec Batuecas, T., Bermejo, L., and Ribas, I. Randall, A. W., drying [of hides], (P.), B., 693. Randall, H. M., and Nielsen, H. H., fine structure of the absorption bands of crystals, A., 1367. Randall, J. T., and Leeds, R. E., reduction of glasses in hydrogen, B., 473. detection of iron oxides in glass sands, B., 473. Randall, M., charts for predicting equilibria, A., 1013. Randall, M., and Gerard, F. W., synthesis of methanc from carbon dioxide and hydrogen, B., 82. Randall, M., and Rossini, F. D., heat capacities in aqueous salt solutions, A., 398. Randall, M., and Shiffler, W. H., deposition of carbon in reaction between carbon dioxide and hydrogen, B., 1003. Randall, M., and Stone, H. A., effect of air on the potential of the mercury-mercurous sulphate electrode, A., 885. Randall, S. S. See Harington, C. R. Randall, W. H. See Weber, F. C. Randles, F. S., and Knudson, A., cholesterol. IV. Relation of ovaries and testes to cholesterol metabolism, A., 719. Randoin, (Mme.) L., and Lecoq, R., attempt to separate the antineuritic vitamin with fuller's earth, A., 358. fundamental rôle of the alimentary equilibrium in the utilisation of lactose, A., 726. alleged toxicity of galactose, A., 955. water-soluble vitamins of group B, A., 1111. production of avitaminosis: vitamin-C, A., 1497. Rangacharya, T. L. K. See Ghosh, J. C. Rangaswami, M., and Venugopalan, M., physical properties of shellac solutions. I., B., 64. Ranger, H. L., means for indicating the purity of liquids, (P.), B., 62. Ranken, C., use of Irish moss as copper finings [in brewing], B., 573. Rankin, C. H., and Rankin Automatic Glass Feeder Co., means for circulating glass in fore-hearths of glass-melting tanks, (P.), Rankin, J. S., magnetostriction of various steels, B., 476. Rankin Automatic Glass Feeder Co. See Rankin, C. H. Ranney, W. B., and Wrigley, Co., W., jun., mixing machine, (P.), B., 740. Ranson, R., and Ford Instrument Co., Inc., dryer, (P.), B., 381. Ranson, S. W. Sco Davenport, H. A., and Dixon, H. H. Rao, A. N. Sce Mukherjee, J. Rao, A. S., second spark spectrum of selenium, A., 1352. Rao, A. S., and Narayan, A. L., second spark spectrum of lead, A., 1354. Rao, A. S. See also Pattabhiramayya, P. Rao, B. L. See Peacock, D. H. Rao, D. A. R., and Sreenivasaya, M., spike disease of sandal (Santalum album). IV. Chemical composition of healthy and spiked sandal stems, A., 1204. Rao, E. L., Varahalu, K., and Narasimhaswami, M. V., phototropy in inorganic compounds, A., 1152. Rao, I. K., ultra-violet Raman spectrum of water, A., 120. Raman effect and electrolytic dissociation, A., 1361. Rao, K. A. N., studies in "strainless" rings. I.  $\beta$ -Substituted stereoisomerie decalins, A., 1297. Rao, K. K., factors influencing the growth and sugar contents of cane, B., 488. Rao, K. R., further triplets of trebly-ionised arsenic, A., 225. arc spectrum of germanium, A., 859. spectrum of trebly-ionised thallium, A., 860. regularities in the arc spectrum of arsenic, A., 1118. Rao, M. G. S., Srikantia, C., and Iyengar, M. S., condensation of aromatic aldehydes with nitromethane, A., 926. substitution in resorcinol derivatives. II. Bromo-derivatives of  $\beta$ -resorvylaldehyde and their orientation, A., 1071. Rao, S. R., soft X-rays from a single-nickel crystal, A., 383. Rao, S. R. Sec also Krishnan, K. S. Rao, S. V. R., and Watson, H. E., phototropic mercury compounds, A., 660. photo-electric emission from phototropic mercury compounds, A., 627. Rao, T. V. M., "bauxite" from Kashmir, A., 788.
Rapatz, F., heat-treatment and testing of high-speed tool steel,
B., 325.

useful and deleterious action of gases in steel, B., 358.

case-hardening [of steel] in cyanide baths, B., 397.

Rapatz, F. See also Backe, M. Raper, R. See Clemo, G. R. Raphael. O. P., production of graded tinting on glass, (P.), B., 284. Rapin, G., direct electrolytic preparation of potassium permanganatc, A., 36. direct electrolytic preparation of ammonium permanganate, direct electrolytic preparation of some metal permanganates, A., 1151. action of certain dioxides on very dilute aqueous solutions of [potassium] permanganate, A., 1408. Rapkine, L., rôle of free oxygen in [egg] development, A., 465. potential of an inert electrode in a solution of acetaldehyde, A., 1015. Rapkine, L., Struyk, A. P., and Wurmser, R., oxidation-reduction potentials of some vital stains, A., 1147. Rapoport, I. B. See Karavaev, N. M. Rapp, examination of pharmaceutical preparations by the extended capillary diagram and the analytical quartz lamp, B., 110. Rappaport, F. See Silberstein, F.
Rappaport, I. See Niederl, J. B.
Rapport, D., and Beard, H. H., effect of protein hydrolysis products on metabolism. III. Specific dynamic effects of protein hydrolysates and amino acids, A., 213. Rasch, C. H. [with Lowry, A.], electrochemical oxidation of anthracene to anthraquinone with a new type of electrode, B., 886. Rasch, J., polarographic studies with the dropping mercury VI. Influence of fatty acids on the maximum of cathode. current due to atmospheric oxygen, A., 1393. Rasch, O., manufacture of compound yarns or threads, (P.), B., 353. manufacture of [compound] textile threads, (P.), B., 514. Rasch, R. H., purified wood fibres as a papermaking material, B., 1042. Rasch, R. H. See also Brown Co. and Richter, G. A. Raschevsky, N. von, theory of physico-chemical periodicity, A., 402 compressibility of crystals and the exponent of the force of repulsion between atoms, A., 499. equilibria in systems containing surface-distributed phases, A., 509. hysteresis phenomena in physico-chemical systems, A., 509. equilibrium and reactions in systems with very large specific surface, A., 509. time variation of thermodynamic processes, A., 755. theory of the equilibrium figures of small drops growing by diffusion in relation to the problem of form in physics, A., 984. Raschig, F., and Prahl, W., oxides of nitrogen, A., 524. Raschig, F. See also Raschig, K. W. Raschig, K. See Freudenberg, K. Raschig, K. W., and Raschig, K. W. (Raschig, F.), cutting plates and sheets from blocks of artificial resins, (P.), B., 989. Rasetti, F., Raman effect in gases, A., 241. selection rules in the Raman effect, A., 627. Raman effect in diatomic gases. I. and II., A., 627, 975. fluorescence spectrum of oxygen, A., 866. incoherent scattering in gases, A., 975. incoherent scattered radiation in diatomic molecules, A., 1127. alternating intensities in the spectrum of nitrogen, A., 1350. Rasetti, F. See also Dickinson, R. G. Rasmussen, E., Hg 11 spectrum in the infra-red, A., 860. Raspopova, N. See Zavadovski, B. Rassers, J. B. F. See Pohlmann, J. Rassow, B., and Brandau, G., reddening of unbleached sulphitecelluloses, B., 428. Rassow, B., and Kraft, H., chemical control of cooking in the sulphite-cellulose process, B., 847. Rassow, B., and Weber, F., behaviour of cotton towards glycol and glycol-hydrochloric acid, B., 675.
Rassow, B., and Zickmann, P., Willstätter-lignin, A., 1282. Rassweiler, G. M. See Paton, R. F. Ratel, M., furnaces with mechanical stokers, (P.), B., 965. Rath, A. von, comparison of Rhenania phosphate and superphosphate as fertilisers, B., 66.

Rath, E., pharmacology of brominated valeric esters, A., 1104.

Rath, J., application of naphthol AS dyes to animal fibres, B., 169. Rath, J., and General Aniline Works, Inc., dyeing of vegetable fibres, (P.), B., 812\*.

Rathbun, J. P., and Westinghouse Electric & Manufacturing Co., heat exchanger, (P.), B., 457, 1001\*.

Rathery, F., Kurilsky, R., and Gibert, S., action of decamethylenediguanidine (synthalin) on the blood-sugar of normal and depancreatised dogs, A., 720. effect of ovarian hormone on the blood-sugar of the normal

dog, A., 850. Rathery, F., Kurilsky, R., and Laurent, Y., action of folliculin on

the blood-sugar of depancreatised bitches, A., 851. Rathsack. See Opitz.

Rathsburg, H., determination of the friction sensitivity of ignition materials, B., 113.

Ratner, S. A., latent carriers of electricity in the gaseous discharge, A., 735. Ratti, R. See Ruggli, P.

Raub, E. See Leroux, J. A. A., and Schenck, R.

Rauchenberger, W. See Schlubach, H. H.

Raudnitz, H. [with Böhm, W.], hystazarin ethylene ether, A., 1452. Raudnitz, H. [with Laube, G.], 5:8-dihydroxy-a-anthrapyridinequinone, A., 579.

5:8-dihydroxy- $\beta$ -anthrapyridinequinone, A., 705. Rauterberg, E., improved form of Schulze apparatus for [soil] cľutriation, B., 787.

Raveau, C., [thermodynamic principles], A., 882.

Ravenna, A., determination of glycerol by means of potassium permanganate, B., 121.

Ravenna, C., and Nuccorini, R., glutaric series, A., 301. glutamine and allantoin in beetroot, A., 361.

Ravenswaay, (Mlle.) H. J. See Meulen, H. ter.

Ravikovitsch, A. See Petrenko-Kristschenko, P. Ravikovitsch, H. See Isgarischev, N. Ravikovitsch, S. See Menchikowsky, F.

Ravis, L. See Berl, E.

Ravitsch, M. I. See Danilitschenko, P. T.

Raw, G., separation of solid materials of different sp. gr., (P.), B., 458.

Rawdon, H. S., strain markings in mild steel under tension, B., 57.

laboratory corrosion tests of mild steel, with special reference to ship plate, B., 325. Rawdon, H. S. See also Epstein, S.

Rawles, B. W. jun. See Chanutin, A.

Rawling, F. G., pulping of wood, (P.), B., 513. production of sodium acetate, (P.), B., 597.

recovery of chemicals [sodium carbonate free from sulphide from wood-pulping waste liquor], (P.), B., 978. Rawling, F. G. See also Rue, J. D.

Rawling, S. O., sensitivity of photographic emulsions. III., B., 340.

Rawlins, F. I. G., co-ordination numbers, A., 744.

Rawlins, F. I. G. See also Snow, C. P.
Rawlins, L. M. C., and Schmidt, C. L. A., combination between basic dyes and proteins, A., 1093.

Rawlinson, H. See Weil, J. A.

Rawson, H. S., and Tucker, W. A., effect of oxidising conditions on accelerated electrolytic corrosion tests, B., 1018.

Ray, A. B., and Carbide & Carbon Chemicals Corporation, purification of liquids [sugar solutions], (P.), B., 412. separation of gas mixtures, (P.), B., 506.

Ray, A. B., Doying, E. G., Butkovsky, J. J., and Carbide & Carbon Chemicals Corporation, manufacture of activated carbon, (P.), B., 547.

Ray, A. B. See also Carbide & Carbon Chemicals Corporation. Ray, A. C., and Dutt, S., composition of neem oil; so-called margosic acid, B., 1021.

Ray, A. C., and Sen, K. C., inhibiting action of sucrose on taurocholate, saponin, and oleato homolysis, A., 589.

hæmolysis in sucrose solution and behaviour of normal serum

in presence of chemical hæmolytes, A., 951.
Ray, A. C. See also Boyd, T. C., Kaul, R., and Sen, K. C. Ray, B. B., multiple absorption and secondary K-absorption

limits in the Rontgen region, A., 868. X-ray absorption limits and the distribution of electrons round the atom, A., 986.

Ray, B. B., and Chaudhuri, D. P. R., ionisation potentials and conductivities of metals, A., 1213.

Ray, B. B., and Mahanti, P. C., fine structure of absorption edges in metals, A., 492.

fine structure absorption edges of metals and metalloids in the X-ray region, A., 747.

Ray, B. B., and Majumder, R. C., critical potentials of light elements for simultaneous transitions, A., 114. origin of soft X-rays with the lighter elements, A., 492.

Ray, B. B. See also Mukherjee, B. C.

Ray, F. E., supposed  $\alpha\beta\beta$ -trimethylglutaric acid of Noyes and Skinner, A., 679.

Ray, J. N. See Aggarwal, J. S., and Bhattacharyya, T.

Rây, N. See Rây, P. C. Rây, P., and Banerji, P., reaction of fusible and infusible white

precipitates of mercury [mercuriammonium chlorides], A., 279. Ray, P, and Bhar, H, magnetic properties of complex compounds and their electronic constitution, A., 126.

Ray, P., and Dasgupta, J., compounds of hexamethylenetetramine with silver and other metal salts and the influence of anionic volume on the capacity for association by the central positive ion, A., 51. Rây, P. See also Bhar, H., and Ephraim, F.

Ray, P. C., isomorphism and homology, A., 1220.

Ray, P. C., and Bose-Ray, K. C., complex compounds of gold with mercaptanic radicals. II. Residual affinities of chloroauric acid, A., 47.

new type of complex platinum compounds; ter- and quinque-

valent platinum, A., 433. Rây, P. C., and Ray, N., tetraethylphosphonium nitrite, A., 303. new series of double sulphates of the copper-magnesium group and the phosphonium bases. I., A., 524.

Rây, S., the Ôhm-Fourier law of conduction, A., 32.

passage of the electric current through a Cooper-Hewitt mercury lamp, A., 228.

high values of c/m obtained with a Thomson vacuum tube, A., 618.

Hittorf's explanation of electrolytic conduction, A., 1014.

generalisation of the virial of Clausius, A., 1226.

velocity of transference of water through a semi-permeable wall by osmotic pressure, A., 1378.

Ray, T. W., preparation of dimethyl phenylethylmalonate, A., 63.

Raybestos Co. See Novak, I. J.

Rayleigh, (Lord), fluorescence of mercury vapour under low excitation, A., 376. excitation of mercury vapour by the resonance line, A., 480.

beryllium and helium, A., 487.

active nitrogen, A., 624.

photo-electric method of measuring the light of the night sky; course of variation through the night, A., 902.

fluorescent and phosphorescent excitation of mercury vapour by the resonance frequency and by lower frequencies, A., 1207. Raymond, A. L., manometric determination of gas in ferment-

ations, A., 1339.
Raymond, A. L., and Blanco, J. G., blood-sugar determination

and separation of sugar with live yeast, A., 207.

Raymond, A. L., and Levene, P. A., synthetic hexosephosphates and their phenylhydrazine derivatives, A., 1278.

Raymond, A. L. See also Levene, P. A. Raymond, W. H. See Plimmer, R. H. A.

Raymond Bros. Impact Pulverizer Co. See Crites. J.

Raymond-Hamet, glucosides of Digitalis purpurea, A., 613. Raytheon, Inc. See Smith, Charles G.

Razubaiev, G., meriquinonoid derivatives of 9:10-dihydrophenarsazine. I., A., 585, 946\*.
meriquinonoid derivatives of the phenarsazine series. II.,

A., 834.

Razubaiev, G. [with Malinovski, V.], meriquinonoid derivatives of the phenarsazine series. Ill. Reduction of derivatives of 5:10-dihydrophenarsazine with formic acid, A., 1472.

Razubaiev, G. See also Ipatiev, V. N. Razumov. See Trefiliev, I. A.

Razumov, A. I. See Arbusov, A. E.
Read, B. E., and Feng, C. T., Indian ephedras, B., 188.
Read, B. E. See also Feng, C. T., and Pak, C.
Read, C. V. B. See Pulvo, Ltd.

Read, E. B. See Kerr, W. R.

Read, F. J., Calaveras Iron & Steel Co., and Demarest, S. H.,

mctal [copper alloy], (P.), B., 604.

Read, J., Campbell, I. G. M., and Barker, T. V., optically active diphenylhydroxycthylamines and isohydrobenzoins. II., A., 1444.

Read, J., Steele, C. C., and Carter, P. G., menthone series. VI. Crystallisation of menthylamines with optically active bases, A., 322.

Read, J., and Watters, A.J., piperitone. X. Synthesis of certain menthadienes, menthenes, and menthanols, A., 1307.

Read, J., Watters, A. J., Robertson, G. J., and Hughesdon, R. S., piperitone. IX. Oxidation reactions of piperitone, A., 1307.

Read, J. See also Hughesdon, R. S.
Read, J. B., and Coolbaugh, M. F., roasting of sulphide minerals,
(P.), B., 250, 856.

Read, J. B. See also Coolbaugh, M. F.

Read, O. R., and Read Machinery Co., Inc., mixing machine, (P.), B., 307.

Read, W.C. See Becket, F.M.Read Machinery Co., Inc. Sec Read, O.R.

Reade, T. H., polarity of halogens in solutions of pyridinium and allied dichloroiodides, A., 765.

Reade, T. II. See also Macmillan, W. G. Reader, V., relation of the growth of certain micro-organisms to the composition of the medium. IV. Addition of mannitol, A., 355.

second thermolabile water-soluble accessory factor necessary for the nutrition of the rat, A., 1203.

Reading, H. C., [down-draught] gas producers [with depth tubes], (P.), B., 707.

Reading, H. C., and Tulloch, T. G., means [valve] for automatically controlling the temperature of a suction gas producer, (P.), B., 199.

Reavell, J. A., spray-drying plants, (P.), B., 496. desiccation of liquids, (P.), B., 627.

electrically heated apparatus for evaporating, distilling, etc., (P.), B., 964.

apparatus for heating by circulation of hot fluids. (P.), B., 1000.

Reavenall, A. C. See Charrington & Co., Ltd.

Rebek, M. [with Mandrino, G.], triphenylmethyl chloride and pyridine; [Goldschmicdt's condensation products of 2-hydroxy-3-naphthoic acid with aromatic aldehydes and their relationships to the triphenylmethane group], A., 1445. Rebek, M., and Kramarsic, V., Goldschmiedt's condensation pro-

ducts of 2-hydroxy-3-naphthoic acid with aromatic aldehydes and their relationships to the triphenylmethane group, A., 556. Reber, E. See Soc. of Chem. Ind. in Basle.

Reber, J. W., and Woodall-Duckham (1920), Ltd., producer or

shaft furnace, (P.), B., 40 Rebiére, G. See Delaplace, R.

Rebmann, L. Seo Pummerer, R. Rebner, W. Sec I. G. Farbenind. A.-G.

Rebuffat, O., ferruginous cements, B., 980. Reckendorfer, P. See Hengl, F., and Röck, G.

Reclaire, A., nerol and its esters, B., 958. Reclaire, A. See also Hendriksz, R. D.

Records, E. H., still, (P.), B., 500.

Reddelien, G., Mueller, Werner, and Agfa Ansco Corporation, N-hydroxycthyl derivatives of [p-]aminophenols [photographic developers], (P.), B., 961.\* eddelien, G. See also Grasselli Dyestuff Corporation.

Reddelien, G. See also Grasselli Dyestuff Corporation.
Redding, O. D., valves for high-pressure and high-temperature

Redding, U. D., varves for high-pressure and high-temperature purposes, (P.), B., 4.

Reddish, G. F., testing antiseptic dyes, B., 417.

Reddish, W. J. See Fischer, C., jun.

Reddish, W. T. See Fischer, C., jun., and Peirce, J. O.

Redeker, H. E. See Stowell, E. Z.

Redfield, A. C., Humphreys, G., and Ingalls, E., respiratory proteins of the blood. IV. Buffer action of hemocyanin in the deficient of Linuxlus and Indiana. blood of Limulus polyphemus, A., 950. Redhead, F. A. See Lambie, C. G.

Redlich, B., preparation of emulsions of liquids or solutions, (P.), B., 308, 876\*.

Redlich, O. See Abel, E.

Redman, L. V., Cheetham, H. C., and Bakelite Corporation, impregnating solution, (P.), B., 366.
Redman, L. V., Turkington, V. H., and Bakelite Corporation,

phenol resin moulding mixture, (P.), B., 903.

Redman, T., hydrogen-ion concentration and the calcium and phosphorus content of the fæces of rachitic children, A., 596. Rednik, T., effect of [intravenous injection of] calcium or crootamine on the blood-sugar curve after administration of dextrose as a test of liver function, A., 1101.

Reece, W. H., chemical reactions in rubber compounds. I. Reactions between pine tar and litharge, B., 612.

Reed, C. I., carbohydrate metabolism in parathyroidectomised dogs, A., 954.

effect of insulin on parathyroidectomised dogs, A., 954. Reed, E.O. See Frey, R. W.

Reed, F. B., and Clearfield Machine Co., grinding or mixing mill, (P.), B., 800.

Reed, F. C., catalytic apparatus for the synthesis of ammonia, (P.), B., 170.

Reed, F. C., and Ernst, F. A., heat interchanger, (P.), B., 963.

Reed, G. B., Orr, J. H., and Campbell, W. A., action of hæmotoxins on oxygenated and reduced blood. I. Bacillus Welchii toxin, A., 474.

Reed, H. S., and Lamie, R. D., utilisation of coal, (P.), B., 704, \$44\*.

distillation of shale, (P.), B., 707.

Reed, L. J., and Berkson, J., application of the logistic function to experimental data, A., 772.

Reed, M. C., effect of antioxidants in typical rubber stocks, B., 445. Reed, R. D., and Withrow, J. R., zirconium. II. Detection of potassium by zirconium sulphate in the presence of ammon-

ium ions, A., 165. zirconium. III. Influence of lithium, rubidium, cæsium, and magnesium on the detection of potassium by zirconium

sulphate, A., 668. zirconium. IV. Precipitation of zirconium by phosphates, A., 778.

Reed, R. F., and Horning, S.C., adsorption of potassium chroniate on zinc, A., 257. Reed, R. F. See also Appel, W. D.

Reeh, J. E. W., refrigeration of products such as foodstuffs, (P.), B., 1030.

Reerink, E. H., decomposition of carbonyl bromide, A., 33.

Reerink, W. See Bunte, K. Rees, A. F. See Seyer, W. F.

Rees, D.J., grinding, crushing, pulverising, mixing, and separating machine, (P.), B., 381\*.

Rees, E., and Gardiner, G., manufacture of coal gas, (P.), B., 632. Rees, F.J. See Maliphant, G.S. Rees, O.W., occurrence of silicates in natural waters, A., 1417.

Rees, R. van, recovery of camphor [from celluloid, etc.], (P.), B., 835.

Rees,  $S.\ H.$  See Greaves,  $R.\ H.$  Rees,  $W.\ J.$ , and Hugill, W., comparison of the properties and industrial durability of lime-bonded and clay-bonded silica bricks, B., 683. Rees, W. J. See also Hubbard, D. W., and Hugill, W.

Reeson, J. N., and Moss, W. L., purification of coal or other gases, (P.), B., 466\*.

Reeve, H. T., and Western Electric Co., Inc., electron emitter,

(P.), B., 902.

Reeves, G. See Brit. Celanese, Ltd.

Reeves, H. G., methylation of dl-glyceraldehyde, A., 1042.

Refinoil Manufacturing Corporation. See Aycock, R. V.

Regan Forge & Engineering Co. See Palmer, W. L.

Regè, A. See Garino, M.

Regeimbal, L. O., Vacha, G. A., and Harvey, R. B., effect of ethylene on the respiration of bananas during ripening, A., 222. Regelsberger, apparatus for continuous automatic measurement of the alveolar carbon dioxide, A., 786.

Regener, E., measurements of albedo in artificial layers of fog, Ā., 504.

Reggiani, G. See Losana, L. Régnier, J. See Fuchs, (Mme.) G.

Regulski, H. See Maslowski, K.

Rehberg, P. B. See Krogh, A.

Rehbinder, P., and Krajuschkina, L., heat effect of the formation of dispersed systems. II. Heat of wetting of powders by solutions of interfacially active substances, and heats of adsorption in solutions, A., 1002.

Rehbinder, P. See also Efimov, V. Rehorst, K., saponin of the sugar beet, A., 568.

beet-saponin, A., 702.

Rehorst, K. See also Ehrlich, F.

Reibnitz, von, determination of iodine value of fatty drying oils, B., 482.

Reich, F. See Abderhalden, E.

Reich, G. T., apparatus for treatment of waste organic mixtures, (P.), B., 450.

Reich, K., and Vavrineck, G., comparative examination of "norit" and "carboraffin" [in sugar refining], B., 372.

Reich, V. See Haitinger, M. Reich, W. See Herzog, O.

See Herzog, O.

Reichardt, H. See Bonhoeffer, K. F. Reiche, F., quantum-mechanical dispersion formula of normal atomio hydrogen, A., 739.

Reichel, J. See Weiss, R. Reichert, T. See Terroine, E. F.

Reichert, W. See Stolle, R.

Reichhelm, G. L., and Gasifier Co., means for producing gas, (P.), B., 273.

Reichinstein, Z. See Rai Khinstein, T. Reichner, K. See Schwenk, E. Reich-Rohrwig, W. See Dworzak, R., and Hecht, F.

Reichstein, T. See Staudinger, H

Reid, E. E., and Hercules Powder Co., removing terpene products from gasoline-terpene mixtures, (P.), B., 804.

Reid, E. E. See also Baker, R. B., Borgstrom, P., Case, F. H., Dearing, A. W., Hann, R. M., Herndon, L. R., and Riegel, E. R. Reid, E. W., and Hofmann, H. E., 1:4-dioxan, B., 708.

Reid, E. W. See also Curme, G. O., jun., and Hofmann, H. E. Reid, H. G. See Ludlam, E. B. Reid, H. S., Maude, A. H., and Canadian Electro Products Co., manufacture of mercury salts, (P.), B., 814.

Reid, J. W. See Gardner, H. W. Reid, R. H. See Reid, W.

Reid, W., Reid, R. H., and Reid, W., jun., rotary screens or separators, (P.), B., 458.
Reid, W., jun. See Reid, W.

Reidt, E. See Schwarz, R.

Reif, G., luminescence of wood extracts, wine distillates, brandies, and vinegars in ultra-violet light, B., 735.

detection of isopropyl alcohol in cosmetics by means of piperonal, B., 737. Reif, W. See Strebinger, R.

Reifenberg, A., origin of Mediterranean red earths (terra rossa), A., 289.

weathering of sandstone, limestone, and basalt in red-earth areas, A., 420.

Reihlen, H., and Debus, M., thorium formates, A., 423. Reihlen, H., Gruhl, A., and Hessling, G. von, photochemical and oxidative degradation of carbonyls, A., 1050.

Reihlen, H., and Kummer, U. von, complex metallic cyanides. II., A., 432.

Reihlen, H., and Zimmermann, W., complex metallic cyanides. III. Compounds of iron and cobalticyanic acids with bivalent heavy metals, A., 1430.

Reilly, G. See Miles, E. H.
Reilly, J., Blair, E. W., and Commercial Solvents Corporation, separation of gases [hydrogen and carbon dioxide], (P.), B., 597.

Reilly, J., Drumm, P. J., and Royle, C., essential oils from Irishgrown plants. V. Oil of dill, B., 957.

Reilly, J., Drumm, P. J., and Creedon, T. V., nitration of phenylbenzylamine derivatives, A., 691.

Reilly, J., and Madden, D., stability of diazonium salts of the triazole series, A., 707.

Reilly, J. See also Donnelly, J. T., and Pringsheim, H.

Reilly, P. C. See Cunningham, O. D., and Derby, I. H.

Reimann, A. See Benckiser, T.

Reimann, A., jun. Seo Benckiser, T. Reimann, A. L. See M. O. Valve Co., Ltd.

Rein, E. See Vesely, V.
Rein, K. See Weinland, R.
Reinartz, L. F., and Nead, J. H., manufacture of commercially pure iron alloys, (P.), B., 781\*.

Reinau, E. H., soil respiration and fertility, B., 407.

Reindel, F., yeast ergosterol. III., A., 61. Reindel, F., and Detzel, A., yeast ergosterol. IV., A., 1443.

Reindel, F., and Niederländer, K., determination of double linkings in sterols, A., 1444.

Reindel, F., and Weickmann, A., zymosterol, A., 1443. Reindel, W. See Pummerer, R. Reinders, W., and Bendien, W. M., influence of lyophile colloids on the stability and electric charge of lyophobe sols, A., 27. Reiner, L. See Fenyvessy, B. von, and Orban, E. Reinhard, M. C., Buchwald, K. W., and Tucker, K. P., production

of colloidal solutions of lead or lead salts, A., 504. Reinhard, M. C., and Schreiner, B. F., production of colour in

glass and in gems by X-rays and radium rays, B., 208.

Reinhard, M. C., and Tucker, K. L., effect of X-rays on crystalline and dissolved sucrose, A., 1248.

Reinhardt, W. See Braun, J. von.

Reinhardt, W. L., and Willard Storage Battery Co., storage battery plate and method of rendering it permanent, (P.), B., 62. Reinhold, H., thermolysis of solids (Ludwig-Soret effect), A., 652,

1391.

Reinhold, H. See also Tubandt, C.

Reinicke, R., quantitative evidence of the structure of the benzene ring and the orientation of its six hydrogen atoms, A., 1432.

Reinitzer, B., and Hoffmann, F., decomposition of potassium permanganate to solid manganese oxides in oxidation reactions; [determination of manganese and arsenic], A., 1032.

Reinsch, E. See Braun, J. von.

Reinsch, B. See Braut, J. Son.
Reinshagen, E. See Tillmans, J.
Reinwein, H. See Paasch, G.
Reis, A., and Schneider, W., röntgenographic interpretation of the nature of the C-C linking, A., 17.

crystal structure of indigotin and fumaric acid, A., 988.

crystal structure of cis-ethylene oxide-dicarboxylic acid, A., 988. crystal structure of tartaric acid, isohydrobenzoin, and rubidium tartrate, A., 1222.

Reis, A. See also Möller, H.

Reissert, A., and Crämer, K., o-aminobenzyl alcohol, A., 182.
Reith, J. F., micro-determination of iodine in organic matter,
A., 337, 414, 1410.

microtitration of iodides [alone] and in the presence of large quantities of nitrites, A., 667.

Reitstötter, J., and Agfa Ansco Corporation, manufacture of silver halide photographic emulsions, (P.), B., 872\*. Reitstötter, J. See also Dieterle, W.

Reitz, H., manufacture of rubber articles, (P.), B., 566. Reizenstein, L. J., processing of [castor] oils, (P.), B., 903. Rekeen Tool Co., Inc. See Robe, W. R.

Rekveld, J. See Ornstein, L. S.
Remesov, I., micro-apparatus for conductivity measurements in small volumes of liquid, A., 858.

Remesov, N. P., actual acidity of the podzol soils and the influence of liming, B., 407.

unsaturated soils, B., 486.

Remfry, J. See Tapsell, H. J. Remick, W. L., apparatus for the treatment of solid-bearing solutions, (P.), B., 192.

apparatus for [oil-]separation of combustible material from its associated non-combustible material, (P.), B., 548.

Remington, R. E., Culp, F. B., and Kolnitz, H. von, potato as an index of iodine distribution, A., 1498. Remington, R. E. See also McClendon, J. F.

Remington, V. H., and Trimble, H. M., oxidation potentials of

some hypochlorite solutions, A., 513. Remington Arms Co., Inc., and Burns, J. E., explosive priming mixtures, (P.), B., 228.

Remington Arms Co., Inc. See also Willis, S. L.

Remmes, M. M. Seo Wiggin, J. D. Remy, H., ruthenium, A., 527.

chemistry of mists and dusts, B., 154.

**Remy,** H., and Lührs, A., ruthenium hydroxytrichloride, ruthenium tetrachloride, and ruthenium trichloride, A., 283.

Remy, T. See Ohly, E. Renaud, M., neutralising power of soaps for cobra venom, A., 845. Renault, L., [apparatus for the hot] forging of metals [with resistance heating], (P.), B., 216.

Renfrew, A. G., bacteria. XXIX. De-fatted residue of avian

tubercle bacilli, A., 1342.

Renfrew, A. G., and Johnson, T. B., hydantoins. XLVII. Polypeptide hydantoins from 2-thiohydantoin-3-acetic acid, A., 330.

XLVIII. Polypeptide hydantoins from hydanhydantoins. toin-1-acetic acid, A., 937.

Renfrew, A. G. See also Johnson, T. B. Rengman, G. See Euler, H. von.

Renn, K. See Grasselli Dyestuff Corporation, and Schirmacher, K.

Renner, F. See Scholl, R. Renning, J., species of yeast stable towards boiling, A., 849.

Renouf, E. A. P., production of artificial stone, (P.), B., 248.

Renshaw, A. See Dyson, G. M. Renshaw, R. R., and Hopkins, C. Y., physiological activity of -onium compounds; phosphoric ester derivatives of choline. VIII., A., 686. Renshaw, R. R. See also Hunt, R.

Rentschler, H. C., Marden, J. W., and Westinghouse Lamp Co., electron-discharge device, (P.J., B., 985. Rentschler, H. C., and Westinghouse Lamp Co., method of exhaust-

ing vacuum devices, (P.), B., 25. electron-discharge device with oxide-coated filament, (P.), B., 62.

Renwanz, G. See Krause, E. Renwick, F. F., principles and practice of [photographic] fixation,

B., 960.

Republic Flow Meters Co. See Cunningham, A. B.

Resnikoff, L. See Shear, M. J.

Resnitsohenko, M. S., action of cyanide on the living oell, A., 97. absolute amount of hydrogen ions in urine on the march and in running, A., 1193.

actual reaction of urine and its relation to fatigue, A., 1193. Resnitschenko, M. S., and Kosmin, N. P., excretion of acids in the urine during work. III. Excretion of phosphorus during work of varying intensity, A., 1332.
Restaino, S. See Carobbi, G., and Zambonini, F.

Rettger, L. F., Plastridge, W. N., and Valley, G., disinfecting properties of alkylphenols. H. n-Butylphenol, A., 1494.

Rettger, L. F. See also Slanetz, C. F. Reunert & Lenz, Ltd. See Simmonds, A. E.

Reuss, A. See Handovsky, H. Reuss, W., flux for welding or soldering of aluminium and other metals, (P.), B., 649, 923\*.

Reuterskiold,  $K_{\cdot}$ , and Andrews,  $E_{\cdot}$ , post-operative blood,  $A_{\cdot}$ , 1481. Revel, L. A. J., filter presses or pressure-filter elements, (P.), B., 627.

Reverdin, F., nitration of methane- and ethane-sulphon-p-phene-tidides, A., 310, 924.

nitration of aromatic compounds in alcoholic solution, A., 1289.

Revere Rubber Co. See Ostromislensky, I. Rewald, B., normal lipin content of organs. II., A., 208.

action of heat on lipins, A., 209. lipin content of butter, A., 209.

preparation of lipins from organs containing chlorophyll, A., 361. lipins. VI. Lipins of the herring, A., 590.

phosphatide content of organs after administration of large amounts of phosphatide. II., A., 845.

carbohydrates of the phosphatides [of soya bean], A., 1347. a double source of error [in food analysis], B., 147.

Rewald, B. See also Hanseatische Mühlenwerke A.-G.

Reychler, A., mctallic lustre tinting effects on gelatin photochemically mordanted, B., 227.

mechanical actions on the photographic plate, B., 699.

action of mercuric salts and of mercury on the photographic plate and on silver bromide-gelatin emulsions in a liquid

medium, B., 871.

Reyerson, L. H., and Swearingen, L. E., catalytic activity of metallised silica gels. V. Oxidation of ethylene, A., 153.

Reyers, F. D., and Cruz, A. O., cogon and rice straw as raw material

for paper manufacture, B., 892. Reyher, P., and Walkhoff, E., toxic action of milk and other

substances exposed to ultra-violet radiation, A., 359. Reymann, C. See Heiduschka, A.

Reymersholms Gamla Industri Aktiebolag, and Sundberg, A. G., detinning of tinned iron scrap, (P.), B., 249.

Reynaert, S., determination of nitrogen in cyanamide, B., 244. examination of agricultural lime, B., 259.

Reynard, O., obtaining from seaweed a stable form of alginic acid and its compounds, (P.), B., 807.

Reyner, C. E., mode of action of formaldehyde on complementfixation systems, A., 1478.

Reynolds, A. H. See Fager, E. P. Reynolds, C. V. See Brady, O. L.

See Brady, O. L.

See Davis, J. D., and Smith, D. F. See Jacob, K. D. See Smith, F. E. Reynolds, D.A.

Reynolds, D. S.Reynolds, H. F.

Reynolds, H. H., Bigelow, L. A., and Kraus, C. A., constitution of triphenylsilicane and its reaction with sodium in liquid ammonia, A., 1473.

Reynolds, L. H. V., and Ensign, W. B., gas burners, (P.), B., 1007. Reynolds, M. C. See Epstein, A. K. Reynolds, R. B., and Adkins, H., relationship of constitution of

alkyl halides to the formation of nitroparaffins and alkyl

nitrites, A., 291.
Reynolds, W. G., manufacture of no-glare writing paper, (P.), B., 774.

Rhead, T. F. E., production of blue and carburetted water-gas in continuous vertical retorts, B., 503.

Rheinboldt, H., molecular compounds of bile acids with fatty acids and alcohols. II. Hyodeoxycholic acid. III. Cholic acid, A., 925.

Rheinboldt, H. [with Flume, E., and König, O.], molecular compounds of bile acids with fatty acids and alcohols. I. Deoxycholic and apocholic acids, A., 443.

Rheinboldt, H., König, O., and Flume, E., "cadeehol" and "camphochol," A., 1306.

Rheinboldt, H., König, O., and Otten, R., organic molecular compounds with co-ordination centres. II. Co-ordination numbers of alkyl esters of fatty acids in choleic acids, A., 1293. Rheinboldt, H., and Schneider, Kurt, molecular compounds of

organic iodides with sulphur, A., 291.

Rheiner, A., preparation of effect threads, (P.), B., 811.

Rheiner, A., and Chemische Fabrik vorm. Sandoz, manufacture of substantive dyes of the stilbene series, (P.), B., 467\*.

Rheinische Kampfer-Fabrik G.m.b.H. See Schöllkopf, K. Rhenania-Kunheim Verein Chemischer Fabriken Akt.-Ges., working-up of potash salts, (P.), B., 681.

Rhenania-Kunheim Verein Chemischer Fabriken Akt.-Gcs., Dieterich, W. von, Aden, F., and Looser, J., [mould for] pro-

duction of roll sulphur, (P.), B., 18.

Rhenania-Kunheim Verein Chemischer Fabriken Akt.-Ges.

See also Kali-Chemie, A.-G., and Rothe, F.

Rhodes, F. H., and Bralnard, S. W., detergent action of soap,

Rhodes, F. H., and Hodge, H. B., jun., viscosity relationships in the system sulphuric acid-nitric acid-water, B., 243.

Rhodes, F. H., and Lewis, A. W., solubility of sodium benzenesulphonate in water and in solutions of sodium sulphate, A., 131.

Rhodes, F. H., and Starr, J. V., reflection factors of white paint, B., 785.

Rhodes, O. S., qualitative test for degraded artificial silk, B., 428. Rhodesia Broken Hill Development Co., Ltd. See Stevens,  $R.\ H.$ Rhodia Chemical Co. See Zimmerli, A.

Riabinin, G. See Sagulin, A. B. Rial, W. D., Barratt, W. R., and Pan American Petroleum Co., purifying and imparting a green fluorescence to lubricating oil, (P.), B., 770.

Rial, W. D. See also Black, J. C.

Ribas, I., and Rancaño, A., stovaine, A., 555.

Ribaud, G., and Nikitine, S., black body [radiation] at the m. p. of palladium by the tube method, A., 366, 967\*.

Ricard, E., and U.S. Industrial Alcohol Co., apparatus for continuous manufacture of absolute alcohol, (P.), B., 374\*. Ricard, P. See Colin, H.

Ricca, B., and Pirrone, F., formation of cyanogen by oxidation of hydrocyanic acid, A., 302.

reduction of azoimide by hydrogen in presence of colloidal palladium, A., 1150.

additive compounds of mercuric cyanide and hydrated metallic azides, A., 1407.

Rice, E. W., determination of moisture in sugar syrups, B., 298. Rice, F. O., and Sullivan, J. J., keto-enol isomerism and the mechanism of homogeneous reactions, A., 35.

catalytic studies on acetoacctic ester, A., 48. Rice, F. O., and Vollrath, R. E., thermal decomposition of acctone

in the gaseous state, A., 1425. Rice, F.O. See also Urey, H.C.

Rice, J. A., and Bubblestone Co., manufacture of cellular concrete, (P.), B., 684.

Rice, J. A. See also Rickard, E. M.

Rice, M.J. See Pearce, J.N.Rice, O.K., perturbations in molecules and the theory of predissociation and diffuse spectra, A., 734.

temperature coefficient of radioactive disintegration, A., 971. types of unimolecular reactions, A., 1016.

Rice, O. K. See also Gibson, G. E.

Ricevuto, A., and Buogo, G., modern methods of sulphur extraction; heat balance and theoretical proportions by weight; new type of furnace, B., 94.

Rich, F.L. See Fraser, L.S. Rich, M.N., and Westinghouse Lamp Co., production of pliable tungsten, (P.), B., 984.

resistance alloy, (P.), B., 985.

Rich, M. N. See also Marden, J. W.

Richard, A., reactions of soya-bean oil, B., 254. Richard, V. H., gas burners, (P.), B., 235. Richards, F. B. See Grant, R. F.

Richards, F. G. See Gregory, F. G.

Richards, H. E. G. See Ascroft, P

Richards, L. A., usefulness of capillary potential to soil-moisture and plant investigators, B., 296.

Richards, O. W., rate of multiplication of yeast at different temperatures, A., 217.

Richards, T. W., and Dole, M., heats of dilution and specific heats of barium and calcium chloride solutions, A., 652.

Richards, T. W., and Françon, M., decomposition of mercurous chloride in concentrated solutions of other chlorides, A., 887.

Richards, T. W., and Gucker, F. T., jun., heats of dilution of sodium hydroxide, acetic acid, and sodium acetate, and their bearing on heat capacities and heat of neutralisation, A., 652.

Richards, T. W., and Hall, L. P., thermochemical behaviour of sodium hydroxide solutions, A., 511.

specific heats of sodium and potassium hydroxide solutions

[at 18°], A., 652.
Richards, T. W., Hall, L. P., and Mair, B. J., compressibility of sodium, barium, and beryllium, A., 253.

Richards, T. W., and Mair, B. J., heat of neutralisation of acetic acid, A., 511. thermochemical behaviour of weak electrolytes, A., 652.

Richards, T. W., Mair, B. J., and Hall, L. P., heats of dilution and heat capacities of hydrochloric acid solutions, A., 652.

Richards, T. W., and Phillips, A. W., at. wt. of copper from the Lake Superior region and from [Chuquicamata] Chile, A., 370. Richards, T. W., and White, J. D., compressibility of thallium, indium, and lead, A., 253.

Richards, W. T., intensity gauge for supersonic radiation in

liquids, A., 753. chemical effects of high-frequency sound waves. II. Emulsi-

fying action, A., 1006. Richards, W. T., and Loomis, A. L., dielectric loss in electrolyte solutions in high-frequency fields, A., 1014.

Richards, W. T. See also Brönsted, J. N. Richardson, A. S., Andrews, J. T. R., and Folzenlogen, R. G., determining [fatty oil] bleaching-loss coefficients, B., 902.

Richardson, A. S. See also Preston, W. C.

Richardson, G. A., and Palmer, L. S., rennin action in relation to electrokinetic phenomena, A., 645.

Richardson, G. M., and Cannan, R. K., dialuric acid-alloxan equilibrium, A., 402.

reaction of azine compounds with proteolytic enzymes, A., 1199.

Richardson, H. K. See Marden, J. W

Richardson, J. W., and Woollett, P. W., canning of meats, (P.), B., 868.

Richardson, K. C., and Horning, E. S., tethelin as a tissueculture medium, A., 1495.

Richardson, L. R., and Welch, C. F. [with Calvert, S.], derivatives of creatinine and diketopiperazine, A., 1462.

Richardson, L. T., and Cutler-Hammer Manufacturing Co., synthetic resin and its manufacture, (P.), B., 28.

Richardson, M., and Soper, F. G., effect of cohesion of medium on reaction velocity; velocity of interaction of N-chloroacctanilide and hydrobromic acid in aqueous solutions, A., 1244

Richardson, O. W., the structure of atomic nuclei, A., 623. new connexion between the absorption spectrum of hydrogen and the many-lined spectrum, A., 1115.

nomenclature and symbolism for the spectra of diatomic molecules, A., 1349.

Richardson, O. W., and Andrewes, U., soft X-rays from crystal faces, A., 383.

Richardson, O. W., and Chalklin, F. C., soft X-ray levels of iron, cobalt, nickel, and copper, A., 15.

Richardson, O. W., and Das, K., spectrum of  $H_2$ : bands analogous

to the orthohelium line spectrum. I. and II., A., 375, 1205. Richardson, O. W., and Davidson, P. M., spectrum of H<sub>2</sub>: the bands analogous to the parhelium line spectrum. I.-IV., A., 616, 731.

energy functions of the H2 molecules, A., 1209.

Richardson, O. W., and Robertson, F. S., emission of soft X-rays by different elements at high voltages, A., 745.

Richardson, R.S., and Nitrogen Engineering Corporation, synthetic production of ammonia, (P.), B., 680. synthetic production of bodies [ammonia] from their com-

ponent gases, (P.), B., 680. Richardson, W. D., and Swift & Co., manufacture of cheese, (P.),

B., 576.

Richardson Co. See Cain, J. R., Fisher, H. C., Lukens, A. R., and Youngblut, G.

Richert, P. H. See Cruess, W. V., and Mrak, E. M.

Richet, C., and Braumann, L., accelerating action of very small quantities of lanthanum salts on fermentation, A., 849.

Richet, C., and Faquet, M., action of minute doses of sea-water on fermentation, A., 1109.

Richfield Oil Co. of California. See Lachman, A.

Richter, A. F. See Dunbar, T. L.

Righter, C., apparatus for spraying and applying viscous oils or fats, (P.), B., 988. Richter, E. F. See Hanle, W.

Richter, G., production of porous building materials, (P.), B., 248. Richter, G. A., and Brown Co., recovering sulphur dioxide from waste [pulp-digestion] gases, (P.), B., 50.
manufacture of raw calcium bisulphite digesting liquor, (P.),

cyclic process for manufacture of kraft pulp, (P.), B., 168.

recovery of valuable products from spent sulphite liquors, (P.), B., 554.

wood fibre for high-grade paper and derivative manufacture, (P.), B., 554.

cellulose composition for esterification [nitration]; composition for conversion into cellulose derivatives [nitrates], (P.), B., 714.

recovery of products [fertilisers] from spent sulphite liquors, (P.), B., 789.

fibre liberation and recovery of valuable constituents of the waste liquor, (P.), B., 893.

production of gas strong in sulphur dioxide, (P.), B., 940. Richter, G. A., Arsdel, W. B. van, and Brown Co., recovery of heat and chemicals [from cellulose waste liquor], (P.), B., 893.

Richter, G. A., Schur, M. O., Rasch, R. H., and Brown Co., conditioning of cellulose fibre for conversion into cellulose derivatives, (P.), B., 677.

Richter, G. H. See Kirner, W. R.

Richter, H. See Schwarz, R. Richter, K. See Le Blanc, M. Richter, P. O. H. See Brandes, A.

Richter, Gutzwiller & Co., regeneration of hardwood, (P.), B., 210. Richtmyer, F. K., and Richtmyer, R. D., satellites of the X-ray

lines La,  $L\beta$ , and  $L\beta$ , A., 1208. Richtmyer, N. K. See Kohler, E. P. Richtmyer, R. D. See Richtmyer, F. K. Rick, A. See Trautz, M.

Rickard, E. M., Rice, J. A., and Bubblestone Co., mixing foam with plastic materials, (P.), B., 702.

Rickard, T. A., iron in antiquity, B., 780.

Ricker, C. W., jun. See Hardy, A. C.
Rickets, W. J. See Freedman, P.
Ricks, F. See Brit. United Shoe Machinery Co., Ltd.
Riddle, F. H. Seo Jeffrey, J. A.

Rideal, E. K., and Wansbrough-Jones, O. H., combustion of platinum, A., 517. Rideal, E. K. See also Lyons, C. G., and Snow, C. P.

Ridge, B. P. See Birtwell, C., and Clibbens, D. A.

Ridge, H. M., apparatus for subjecting a mass of powdered or granular material to the action of gases, particularly applicable to the calcining and roasting of ores and similar materials, (P.), B., 522.

Ridgway, L. A. See Brazier, S. A. Ridout, J. H. See Best, C. H.

Riebeck'sche Montanwerke Aktien-Gesellschaft, A., production of material of the consistency of ointment from colophony, (P.), B., 27.

preparation of stable emulsions of coal dust in oil, (P.), B., 233. extraction of montan wax, (P.), B., 349.

refining of carnauba wax and candelilla wax, (P.), B., 727. manufacture of purified montan wax, (P.), B., 1007.

Riebeck'sche Montanwerke Aktien-Gesellschaft, A., and Hellthaler, T., bleaching of montan wax, fractions thereof, or wax alcohols or acids obtained therefrom, (P.), B., 198.

Riebl, R., power consumption in [rubber] erepeing mills, B., 612.

Riebl, R. See also De Vries, O. Riebling, C. See Embden, G

Rieche, A. [with Querberitz, F.], micro-determination of mol. wt.

by the chillioscopic method, A., 167. Rieche, A., and Hitz, F., alkyl peroxides. II. Methyl ethyl peroxide and refractometric investigations on alkyl peroxides, A., 292.

alkyl peroxides. III. Methyl hydrogen peroxide, A., 1268.

Rieche, A. Sce also Lederle, E

Riecheneder, K., magnetic susceptibility of halogen ions, A., 1370. Riecker, H. H., relation of chromatin to hæmoglobin and bilirubin, A., 952.

Rieckhoff, H., high-frequency conductivity and dielectric constants of aqueous solutions of electrolytes, A., 1239.

Rieckhoff, H., and Zahn, H., high-frequency conductivity of aqueous solutions of electrolytes, A., 512,

Riede, W., occurrence of fractures in brazing steel, B., 778.

Riedel, F. See Herbel, E.

Riedel Akt.-Ges., J. D., production of aromatic aldehydes, (P.), B., 672

Riedel-E. De Haen Akt.-Ges., J. D. See Schmidt, E. W.

Riedl, H. J. Seo Fischer, Hans.

Riedl, R., machines for kneading or mixing plastic masses, liquids, or powdery material, (P.), B., 498.

Riegel, E. R., and Buchwald, K. W., ultra-violet absorption of p-aminobenzoic esters in water solution, A., 441.

Riegel, E. R., Post, H. W., and Reid, E. E., nitration of substituted anilines, A., 436.

Riehl, E., Lind, O., and Henkel & Co. G.m.b.H., [detergent for] washing of textile goods, (P.), B., 947\*.

Ries, E. D., relation between physical characteristics and lubricating values of petroleum oils, B., 1039.

Ries, K., rapid determination of vanadium in alloyed and unalloyed steels, B., 752.

Ries, K. See also Hieber, W.

Riesen, I. von. See Demuth, F. Riesenfeld, E. H., formation and decomposition of ozone, A., 1016. Riesenfeld, E. H., and Gurian, D., intermediate products of the combustion of methane, A., 289.

Riesenfeld, E. H., and Hamburger, T., pyknometer for viscous substances, A., 1034.

chemical determination of mechanical wood pulp in paper, B., 810.

Riesenfeld, E. H., and Hecht, O., photochemical reaction between ethylene glycol and dichromate, A., 895.

Riesenfeld, E. H., and Schumacher, H. J., thermal decomposition of ozone at low pressures, A., 146.

Riesenfeld, E. H., and Wassmuth, E., influence of indifferent gases on the thermal decomposition of ozone, A., 1242.

Riesenfeld, E. H., and Willstaedt, H., [gelatin compositions for] printing rollers, B., 693. Rieser, A. See Blanck, E.

Riesmeyer, A. H. See Ogburn, S. C., jun.

Riess, C., determination of organically combined sulphuric acid in sulphonated oils, B., 364.

determination of insoluble matter in tannin extracts, B., 567. Riesz, E. [with Lorenz, A., Myschalov, C., and Strakosch, O.], oxidation products of 4:4'-dichloro-2:2'-dinitrodiphenyl sulphide and disulphide, A., 60.

Riesz, E., Berndt, F., and Hitschmann, G., phenol- and cresol-sulphonyl chlorides, A., 59.

Riesz, E., and Pilpel, F., constitution of cresoldisulphonyl chlorides, A., 59.

Riesz, E. See also Pollak, J., and Schuloff, R.

Riesz, H., and Hübsch, R., thiazole derivatives, A., 1469.

Rieth, E., influence of drying on the strength of paper, B., 749.

Rieth, K., strength of cellulose [pulps], B., 1042.

Riezler, W., Doppler effect with homogeneous hydrogen canal rays, A., 1115.

Rigby, G. W., constitution of flax cellulose, A., 175.

Rigby, T., manufacture of cement, (P.), B., 248\*.

manufacture of cement by the wet process, (P.), B., 435\*.

Rigg, T. See Easterfield,  $\tilde{T}$ . H.

Rigler, R., heart hormone; active constituent of Haberlandt's frog's heart hormone, A., 1342.

Rigó, L., and Veszelszky, L., influence of ergotamine on bloodsugar concentration, A., 349.

Rigó, L. See also Láng, S.

Rigobello, G., vitamin content of olive oil irradiated with ultraviolet rays, A., 359.
Riiber, C. N., Minsaas, J., and Lyche, R. T., modifications of

galactose, A., 1427.

Rile, J. H. See Hercules Powder Co.

Riley, F. T., and Bailey, K. C., vapour pressures of piperidine and a-picoline; application of Dühring's rule to compounds of the pyridine group, A., 1137.

Riley, G. B., manufacture of splinterless glass, (P.), B., 247. apparatus for manufacture [sealing edges] of reinforced glass, (P.), B., 474.

[apparatus for] manufacture of reinforced or compound glass, and coating and treatment of sheets of other material, (P.),

Riley, H. L., complex salts. I. Preparation and properties of

some selenitopentamminecobalt salts, A., 41. complex salts. II. Preparation, properties, and stability of some bisdicarboxylato-copper salts, A., 896.

Riley, H. L., dielectric constant of desiccated oxygen, A., 980. Riley, H. L., and Fisher, (Miss) N. I., electrolytic dissociation of some metal malonates, A., 1237.

Riley, R., and Imperial Chemical Industries, Ltd., recovery of volatile liquids, (P.), B., 459.

Riley, R. S., and Sanford Riley Stoker Co., pulverising mill, (P.), B., 543.

Riley Stoker Corporation, pulverised fuel burner, (P.), B., 771. Riley Stoker Corporation, and Craig, O., pulverising apparatus, (P.), B., 306.

Riley Stoker Corporation. See also Beach, D. K., Butt, H., Craig, O., and Daniels, F. H.

Rimann, E., bodenbenderite, a new mineral of the Argentine, A., 1162

Rimarski, W., fire and explosion risk with acetylene, B., 877. dissolved acetylene, B., 1037.

Rimattei, F., determination of dilute aqueous solutions of "argyrol" by photographic nephelometry, A., 1410.

Rimington, C., relation between cystino yield and total sulphur in wool, A., 342.

isolation of a carbohydrate derivative from serum-proteins, A., 837.

relation between cystine yield and total sulphur in various

animal hairs, A., 1191. Rinck, E., equilibrium in the liquid state between potassium, sodium, and their bromides, A., 649.

densities of liquid potassium and sodium, A., 993.

Rinck, F. B., and Western Electric Co., Inc., production of protective coatings on ferrous metals, (P.), B., 561.

Rindell, A., influence of various fertilisers on the manurial action of "insoluble" phosphate, B., 31.

Rindtorff, E. See Abderhalden, E. Ringrose, H. T., apparatus for indicating the presence of inflammable vapours or gases, (P.), B., 970.

Rinkenbach, W. H., and Snelling, W. O., diethylene glycol dinitrate and its preparation, (P.), B., 540.

Rinkes, I.J., bixin, A., 931.

action of sodium hypochlorite on amides. V., A., 1296. Rinman, E. L., preparation of sulphite-cellulose, (P.), B., 50. treatment of waste sulphite-cellulose liquor, (P.), B., 50, 391\*.

regeneration of spent liquor in the preparation of sodium bisulphite cellulose, (P.), B., 203.

production of cellulose and paper from straw, esparto, reed, and similar raw materials, (P.), B., 639\*. production of pure aluminium hydroxide particularly from

aluminium-containing raw materials rich in silica, (P.), B., 1015\*.

Rinse,  $J_{\cdot \cdot}$ , copper and silver numbers as factors for the evaluation of cellulose products, B., 13.

Rinse, J. See also Schoen, M. J.

Rintelmann, W. L., and Goodrich, R. J., preparation of oo'-dicarboxydiphenyldiaminoanthraquinones, (P.), B., 748. ipan, R., metallic cyanates. III. Ammines of the simple

Ripan, R., metallic cyanates. cyanatcs with hexamethylenetetramine, A., 41.

metallic cyanates. IV. Chromium; gravimetric determination of chromium, A., 43. metallic cyanates. V. Separation of the metals of the third

analytical group, A., 43. detection of zinc in presence of manganese, nickel, and cobalt, A., 285.

metallic oyanates. VI. Detection of cobalt; test for cobalt in presence of iron, A., 1414.

Ripan, R, and Dima, L, formation of amminothiocyanates in aqueous solution. I. Simple ammines with hexamethylenetetramine, A., 1406.

Ripan, R. See also Spacu, G.

Ripley, R. R., and Schwarz, S. C., recovery of gas tars from their emulsions with water, (P.), B., 842.

Rippel, A. See Storck, A.

Ripper, K., moulding compositions, (P.), B., 691, 863. Ripper, K., and Pollak, F., manufacture of moulded artificial masses by removing the liquid medium from emulsion colloids,

(P.), B., 691. Rippey, H. F. See Laucks, I. F.

Rischbieth, P., gas-volumetric determination of nitrogen in ammonia, carbamide, and ammonium salts, A., 42.

Risdon, F. P., and Texas Co., fractionating apparatus, (P.), B., 580.

Rising, M. M., and Johnson, C. A., biuret reaction. I. Biuret reaction of acid imides of the barbituric acid type, A., 196.

Rising, M. M., Muskat, I. E., and Lowe, E. W., salts of aromatic nitriles. II. Potassiophenylacetonitrile, A., 312. Riskina, N. B. See Pigulevski, G. V.

Risler, J., and De Courmelles, F., action of luminous rays on potassium chloride, A., 37. Rispler, A. L., distilling or cracking oils and like carbonaceous

liquids, (P.), B., 348.
Risse, F. See Grasselli Dyestuff Corporation.
Risse, O., X-ray photolysis of hydrogen peroxide, A., 407.

Rissel, E. See Hertel, E.

Ritchie, C. F., Gale, W. A., and American Potash & Chemical Corporation, refining of borax, (P.), B., 939.

Ritchie, M., at. wt. of phosphorus, A., 736. Ritchie, W. S., and Hogan, A. G., soluble proteins of rabbit muscle, A., 586.

Ritschl, E., and Villars, D. S., band spectra and electron terms of the molecules Na2, NaK, and K2, A., 11.

Ritsert, E., manufacture of amino-aromatic esters for use as anæsthetics, (P.), B., 73\*.

Ritter, G. J., dissection of wood fibrils by chemical means, B., 390. determination of a-cellulose, B., 1009.

Ritter, H. See Gluud, W.

Ritter, J. J., and Schmitz, G. H., constitution of Bandrowski's base, A., 804.

Ritter, O. See Kaufmann, H. P.

Rittmann, A., Etna and its lavas, A., 420.

Rivat, G. See Brit. Celanese, Ltd.

Rivier, A. See Briner, E. Rivier, H., and Borel, J., absorption spectra of thiocarbamides; constitution of thiocarbamide, A., 57.

Rivier, H., and Farine, A., derivatives of 4:4'-diaminodiphenylmethane, A., 1437.

Rivière, G., and Pichard, G., fertilisation of soils poor in lime; comparative tests with various carbonates, B., 106.

Rivkin, H. See Levine, S. Z.

Roadhonse, C. L. See Koestler, G. Roark, R. C. See Carter, R. H.

Robak, C. A., wood separators for lead storage batteries, B., 24.

Robb, J. A. See Hall, R. E. Robb, J. F., concrete and similar mixers, (P.), B., 357.

Robb, L. J., and Heyl & Patterson, Inc., dryer, (P.), B., 579.
Robbins, B. H., absorption, distribution, and excretion of carbon tetrachloride in dogs under various conditions, A., 1487.

Robbins, W. R. See Nightingale, G. T.
Robe, W. R., and Rekeen Tool Co., Inc., recutting or sharpening tools having numerous fine cutting edges, (P.), B., 822.

Roberts, C.J. See Williams, J.F.Roberts, G. I. See McAfee, A. M.

Roberts, G. V., jun., machine for mixing dry and liquid materials, (P.), B., 928.

Roberts, H. M. See Ewan, T.

Roberts, H. P., Merkle, H. A., and Rubber Service Laboratories, Co., manufacture of arylthiazole compounds, (P.), B., 888. Roberts, H. P. See also Bartram, T. W., and Hand, C. N.

Roberts, H. S., and Ksanda, C. J., crystal structure of covellite, A., 870.

Roberts, J. H., and Imperial Chemical Industries, Ltd., power

presses, (P.), B., 802.

Roberts, J. H., and Olin, F. W., recovery of explosives from shells, (P.), B., 494.

Roberts, J. K. See Forrest, H. O.

Roberts, K. C., and Smiles, S., methoxy-derivatives of thio-

xanthone, A., 824, 934.

Roberts, M. H., and Air Reduction Co., Inc., separation of gases [helium] from [natural] gaseous mixtures, (P.), B., 171.

Roberts, M. H. See also Tolman, R. C. Roberts, R. P. See Brit. Celanese, Ltd.

Robertshaw, G. F. See Burton, D.

Robertson, A., synthesis of glucosides. II. Preparation of some galactosides, A., 1167.

Robertson, A., and Robinson, R., characterisation of the anthocyanins and anthocyanidins by means of their colour reactions in alkaline solutions, A., 477.

Robertson, A., and Waters, R. B., synthesis of glucosides. III. Glucosides of hydroxyxanthones, A., 1427.

Robertson, D., preservation of perishable [tinned] food products, (P.), B., 301.

Robertson, F. D. S., and Clark, F. G., metallurgical apparatus and process [for reducing iron ore], (P.), B., 478. Robertson, F. S. See Richardson, O. W.

Robertson, G. J. See Hughesdon, R. S., and Read, J. Robertson, G. R., wing top oxygen-gas burner, A., 44.

the Trona enterprise [at Searles Lake, California], B., 596. Robertson, H. M., apparatus for [heat] treatment of [carbon-aceous] materials, (P.), B., 423.

Robertson, J. See Patterson, T. S.

Robertson, J. H., manufacture of unsplinterable glass. (P.). B., 247, 323.

Robertson, J. K., MacKinnon, K. A., and Zinn, W. H., continuous spectrum of mercury, A., 237.

Robertson, J. K. See also MacKinnon, K. A. Robertson, J. M., X-ray investigation of the structure of naphthalene and anthracene, A., 1367.

microstructuro of rapidly cooled steel, B., 436.

Robertson, J. M. See also Henderson, G. G.

Robertson, J. W. See Bingham, E. C.

Robertson, T. B., colorimetric method of determining guanine: application to determination of nucleo-cytoplasmic ratios, A., 715.

Robertson, T. B. See also Marston, H. R. Robertson, T. E., dyeing of fabric, (P.), B., 894. Robeson, F. L., automatic mercury still, A., 418.

Robin, J., rubrene; nitrogenous substances from α-chloro-ααγ-triphenylallylene, A., 1056.

formation of rubrene from compounds not containing chlorine, A., 1175. Robin, J. See also Moureu, C.

Robinson, A. L., b.-p. elevation of acetono solutions as related to the interionic attraction theory, A., 1009.

Robinson, B. B. See Trevethick, A.

Robinson, C. S., Huffmann, C. F., and Mason, M. F., results of ingestion of certain calcium salts and of lactose, A., 1485.

Robinson, C. S. See also Schimmel, S.

Robinson, E. Y., and Metropolitan-Vickers Electrical Co., Ltd., manufacture of electron-emitting bodies [cathodes], (P.), B., 527.

Robinson, G. W., classification of [Welsh] soils for purposes of

survey, B., 694.
Robinson, G. W., McLean, W., and Williams, Rice, determination of organic carbon in soils, B., 487.

Robinson, H., and Piercy Co., conversion of foodstuffs for cattle, (P.), B., 868.

Robinson, H. R., and Young, C. L., absorption of X-rays, A., 230. Robinson, Herbert W., and Parkes, D. W., resolution of emulsions of tar or tar oils, (P.), B., 121\*.

methods of obtaining bodies of the o-di[hydr]oxybenzene series, and treatment of ammonia liquor and like liquors, (P.), B., 313.

production of soluble lead reagents [containing lead chloride], (P.), B., 322

Robinson, Howard W., effect of neutral salts on pn of phosphate buffer mixtures, A., 1011.

Robinson, J., production of castings of cast iron mixed with steel, (P.), B., 360.

cupola furnace, (P.), B., 603. Robinson, J. C. See Slater & Co. (Engineers), Ltd., J.

Robinson, J. D. See Gilman, H.

Robinson, M. E., methods for the determination of the nitrogenous constituents of a cyanophoric plant, Prunus laurocerasus, A., 1345.

Robinson, P. See Morton & Co., Ltd., R. Robinson, P. L. See Briscoe, H. V. A., and Parker, T. W.

Robinson, R., determination of small quantities of mercury in presence of organic and inorganic compounds, A., 531.

Robinson, R., and Venkataraman, K., anthoxanthins. VIII. Synthesis of morin and of 5:7:2':4'-tetrahydroxyflavone, A., 325.

Robinson, R., and Willstätter, R., chrysanthemin and asterin, A., 192.

[cyanidin. I.], A., 192.

obinson, R. See also Baker, W., Clayton Aniline Co., Ltd., Fawcett, R. C., Heap, T., Lapworth, A., Martland, M., Perkin, Robinson, R. W. H., jun., and Robertson, A.

Robinson, R. A. See Harned, H. S.

Robinson, R. D. See Prowse, F. J.

Robinson, R. H., Hartman, H., and United States, removal of residual poisons from and the preservation of fruits, (P.), B., 536.

Robinson, S. K., and K-P-C. Co., preparation of lactic salts (P.), В., 867.

Robinson, W. O., detection and significance of manganese dioxide in soil, B., 571.

Robinzon, E. A. See Nametkin, S. S.

Roblson, R. See Fell, H. B., and Macleod, M.

Robseheit-Robbins, F. S. See Sperry, W. M., and Whipple, G. H. Robson, S., manufacture of ammonium sulphate from gas-works' liquor, (P.), B., 9.

roasting of zine sulphide ores, (P.), B., 361.

Robson, S., Lambert, B., and Nat. Processes, Ltd., manufacture of sulphuric acid [oleum, etc.], (P.), B., 206.

Robson, S. See also Nat. Processes, Ltd.

Robson, W., protein metabolism in oystinuria, A., 343.
Rocard, Y., hydrodynamics and the kinetic theory of gases, A., 395. fall of a heavy gas in a light gas; stability of ozone in the higher atmosphere, A., 738.

Rocard, Y. See also Bogros, A., Cabannes, J., and Ponte, M. Roche, A., resorption of pentoses in nutrition, and the assimilation of pontoses, A., 1333.
Roche, A., and Roche, J., participation of a phosphorus compound

in glycolysis of blood in vitro, A., 950.

Roche, A. See also Henriques, V.

Roche, G., physico-chemical properties of natural globin, A., 1189. Roche, J., determination of carbon in filtrates of precipitated blood, A., 1327. Roche, J. See also Boivin, A., and Roche, A.

Roche, J. N. See Averill, H. P. Rochester, T. F., and Korect Air Meter Corporation, separator of liquids from gases, (P.), B., 1036.

Rochline, E. See Nadson, G.

Rochline-Gleichgerwicht, E. See Nadson, G.

Rochussen, F., preparation of fatty acids from their higher homologues, A., 1270.

Rock, G. D., and Klosky, S., dielectric constants of silver sols when diluted with varying amounts of ethyl alcohol, A., 261.

Rockstroh, J. See Klemm, W.

Rockwell, G. E. See Howard, R. C. Rockwood, E. W., Turner, R. G., and Pfiffner, J. J., new constituent of blood, A., 1190.

Rodd, E. H. See Brit. Dyestuff Corporation, Ltd., and Imperial Chem. Industries, Ltd.

Rodebush, W. H., entropy of hydrogen, A., 1227.
Rodebush, W. H., and Michalek, J. C., vapour pressure and vapour density of intensively dried ammonium chloride, A., 636.

Rodebush, W. H., and Peterson, J. M., electrolysis of organometallic compounds, A., 432.

Rodenkirchen, J. See Scheunert, A.

Rodgers, R. L., and Charcolite Corporation, apparatus for carbonising coal, (P.), B., 349\*.

Rodillon, G., determination of chlorides in milk, B., 262. Rodin, S. V. See Kitaigorodski, I. I.

Rodin, S. V. See Kitaigorodski, I. I.
Rodionov, W. M. [with Remankov, and Vvedenskaja, (Mlle.),
Viaskov, (Mlle.), Vedernikov, (Mlle.), Federov, (Mlle.), and
Tourkowskaja, (Mlle.)], alkyl esters of aromatic sulphonic acids as alkylating agents, A., 305.

Rodionov, W. M. [with Zenkovich, V. B., and Holmogorzeva, J. A.],  $\beta$ -amino- $\beta$ -arylethano- $\alpha$ -dicarboxylic acids; mechanism of Knoevenagel synthesis of cinnamic acids, A., 557.

Rodionov, W. M., Kanevskaja, S. J., and Kupinskaja, G. W., action of alkali hypochlorite on hemipinimide, A., 1447.

Rodionov, W. M., and Postovskaja, E. A., β-amino-β-arylaliphatic acids from aromatic aldehydes and malonic acids, A., 557.

Rodionov, W. M., and Vedenski, V. E., action of methyl p-toluenesulphonate on α-naphthylamine, A., 437.

Rodman, C. J., and Westinghouse Electric & Manufacturing Co., deoxygenation of enclosed atmospheres [of oil-immersed electric transformers, etc.], (P.). B., 946.

Rodolico, F., phosgenite of Monteponi, A., 168.

cinnabar from Idria, A., 536.
Rodrignez Pire, L., the "Ditte reaction," A., 778.

Rodwell, A. G., Roper, W., and Hart, A. J. C., cements, paints, etc. [containing alkali silicates], (P.), B., 248.

Roe, J. H., and Kahn, B. S., determination of calcium in blood, A., 339.

Roeder, G., early detection of maxtitis by examination of milk, A., 954.

solution of the butyrometer problem, B., 217.

sensitiveness of the "thybromol" test in comparison with other methods for detecting pathological changes in milk, B., 795.

Reer, O., separation of calcium and magnesium by the exalate method, A., 530.

Röhm, O., mineral tanning process, (P.), B., 904.

Roehm, R. R. See Williams, R. J.

Röhm & Haas A.-G., manufacture of compound [unsplintcrable] glass, (P.), B., 1016. Röhre, K. See I. G. Farbenind. A.-G.

Roell, E. See Gleu, K.

Rölz, A., increasing the efficiency of mash tubs for massecuite, etc., (P.), B., 791.

Rölz, E. See Müller, Adolf.

Roemer, F. See Grasselli Dyestuff Corporation. Röntgen, P., and Schwietzke, G., influence of sulphur dioxide on bronze and copper, B., 752.
Rördam, H. N. K., Walden inversion. II., A., 1041.

Roese, H. F. See Bornstein, A.

Roeser, W. F., thermoelectric temperature scales, A., 1415.

Rösiö, B., occurrence of vitamin-A in blood and blood-serum of domestic animals, cow's milk, milk products, and foodstuffs, A., 959.

Roessler & Hasslacher Chemical Co. See Carveth, H. R., Gilbert, H. N., Roos, R., Storch, H. H., and Trusler, R. B.

Roetheli, B. E. See Forrest, H. O.
Röttinger, A. C., apparatus for micro-determination of sulphur dioxide in air, A., 1256.

semi-microchemical method for the determination of gluten in flour, B., 299.

micro-determination of caffcine in coffee, B., 908.

Rötzel, C., coating band iron with a rust-protection material, (P). B., 524.

Roffey, F. See Garner, W. E.

Roffo, A. H., cholesterol in malignant tumours, A., 210.

reaction for diagnosis of cancer, A., 344.

Roffo, A. H., and Correa, L. M., membrane of the egg of Voluta brasiliana as dialyser, A., 90.

existence of substances resembling insulin in benign and malignant human tumours, A., 210.

transformation of cholesterol by X-rays, A., 523. destruction of cholesterol by X-rays in vitro, A., 1292.

Roffo, A.H., and De Giorgi, H., action of rubidium on the serum, A., 720.

reaction of neutral-red in cancerous sera and its relation to other dyes, A., 840.

Roga, B. See Swientoslawski, IV.

Rogatkin, N. N., low-temperature coking of Chelyaba brown coals, B., 763.

Roger, R., and McKenzie, A., persistence of optical activity during elimination of water from optically active glycols. II. Production of optically active ketones by semi-pinacolinic transformation, A., 317.

Rogers, A., and Lee, R. Y. H., tanning [of hides], (P.), B., 865.

Rogers, F. M., Shaeffer, E. J., and Standard Oil Co., pressure distillation of hydrocarbon oils, (P.), B., 314.

Rogers, F. M., and Standard Oil Co., treating hydrocarbon oil residues, (P.), B., 588.

Rogers, F. M. See also Bransky, O. E., and Wilson, R. E. Rogers, J. S., fineness and available lime content of chemical

quicklimes, B., 93. Rogers, L. A., and United States, preparation of milk for infant feeding, (P.), B., 868.
Rogers, L. M. See Goldberger, J.

Rogers, L. O., and Whittier, E. O., limiting factors in lactic fermentation, B., 413. Rogers, M. N. See Farr, C. C.

Rogers, R. A. See Carnochan, R. K.
Roginski, S. Z., Saposchnikov, L. M., and Kutscherenko, N. A.,
catalysis of solids by solids. II. Catalytic decomposition of mercuric oxide, A., 1020.

Roginski, S. Z., and Schulz, E., catalytic processes in the solid phase. I. Decomposition of potassium permanganate, A., 153. Rogler, A., manufacture of lustrous, plastic masses from linseed

and tung oils, (P.), B., 138. Rogozinski, F., and Starzewska, M., variation in the composition

of the cell-wall in oats during growth, A., 611. Rohland, IV., influence of the use of sponge iron on the properties of steel, B., 982.

Rohlfs, H. C. See Brit. Thomson-Houston Co., Ltd.

Rohm & Haas Co. See Hollander, C. S.

Rohmann, A. See Tammann, G.

Rohmer, G. E., and National Coal Distillation Corporation, lowtemperature distillation of bituminous coal, (P.), B., 505.

Rohn, W., technical properties of metals melted in a vacuum furnace, B., 211.

bimetals, B., 820.

Rohn, W., and Vacuum-Schmelze Ges.m.b.H., [refractory linings in] furnace construction, (P.), B., 395\*.

Rohn, W. See also Vacuumschmelze Ges.m.b.H. Rohn, W. J. P., reduction of shrinkage cavities [in metals] and vacuum melting, B., 819.
Rohrbach, K. L. See Miller, A. B.
Rohrschneider, M., absorbent filling material for use in acetylene

storage containers, (P.), B., 9.

Rojahn, C. A., pine-needle extract and pine-needle bath extract, B., 870, 871.

Rojahn, C. A., and Struffmann, F., new reaction of hydrastino and papaverine, A., 829.

Rojansky, V., theory of the Stark effect in hydrogenic atoms, A., 224.

ratio of the mass of the proton to that of the electron, A., 861. Rojansky, V., and Van Vleck, J. H., non-metastability of the 2s level in atomic hydrogen, A., 1349.

Rojansky, V. See also Hughes, A. L.

Róka, K., and Holzverkohlungs-Ind. A.-G., chlorination of methane, (P.), B., 917\*.

Róka, K. See also Holzverkohlungs-Ind. A.-G. Roland, H. See Henriques, V.

Roland, R., celluloid compounds, (P.), B., 894\*.

Roland, R., and Roland Fireproof Celluloid Corporation, celluloid compound, (P.), B., 750.

Roland Fireproof Celluloid Corporation. See Roland, R.

Rollsch, T. See Zavadovski, B. Roll, (Mme.) C. See Korschun, G.

Rolla, L., and Piccardi, G., ionisation potentials of the rare-earth elements in relation to their position in the periodic system, A., 367.

Rolland, J. See Wahl, A.

Rollefson, A. H., infra-red absorption spectrum of hydrogen

sulphide, A., 1215.
Rollefson, G. K., photosynthesis of hydrochloric acid at low pressures, A., 522.

modified Pirani gauge for use in corrosive systems, A., 533.

Roller, D., purification of mercury, A., 896. effect of toluene on the photo-electric behaviour of mercury, A., 1357.

Roller, P. S. See Fales, H. A. Rollet, A. P., precipitation of manganese dioxide by electrolysis with alternating current, A., 892.

Rollett, A., breins from Manila elemi resin, A., 1457. Rollett, R. See Hohage, R.

Rolz, A., cooling devices for mashing vessels for crystallisable material, more particularly for the sugar industry, (P.), B., 412. Rom, P. Sec Zechmeister, L.

Romagnoli, E., compounds of camphor with amines, A., 72. Roman, W. See Pincussen, L.

See Rodionov, W. M. Romankov.

Romanova, See Rodionov, W. M. Romanova, M. See Gross, E. Romanova, M. See Gross, E. Romanova, N. V., copper compounds of diethylbarbituric acid, A., 939.

Romburgh, P. van, nitration of esters of phenylmethylcarbamic acid, A., 1289.

Romburgh, P. van, and Veen, A. G. van, "Minjak pelandjau," the exudation from the wood of Pentaspadon Motleyi, Hook, A., 1204.

Romeis, B., and Wüst, J., effect of minimal doses of thyroxine on gaseous metabolism in invertebrates, A., 475.

Romieux, C. J. See Novotny, E. E.

Romp, J., Brandsma, W. F., and Naamlooze Vennootschap Philips' Gloeilampenfabrieken, transformer, (P.), B., 688.

Rona, P., and Itelsohn-Schechter, R., hydrolysis of ethyl lactate by liver-esterase, A., 353.

Rona, P., and Mislowitzer, E., enzymic proteolysis. III., A., 217. Rona, P., and Oelkers, H. A., enzymic synthesis of protein, A., 354.

Rona, P., and Weber, H. H., mechanism of the specific action of ions on proteins; degree of activity of different myogen salts,

Rongier, J. R., apparatus for removing tar from gases evolved in the dry distillation of wood, (P.), B., 9.

Ronshina, N. M., drop method for detection of nitrite ions in presence of other anions, A., 1256.

Ronzoni, E. See Barr, D. P.

Rooke, H. S. See Lampitt, L. H.

Rooksby, H. P., X-ray examination of the effect of heat on aluminium hydroxide, Al<sub>2</sub>O<sub>8</sub>,3H<sub>2</sub>O, A., 1407.

Rooksby, H. P. See also Hyslop, J. F. Roon, J. D. van der, cyclic acetals, A., 291.

Rooney, A. B. See Holmes, R. M. Rooney, J. H. See Brit. Celanese, Ltd.

Rooney, T. E., and Barr, G., determination of hydrogen in steel, B., 397.

Roos, A. T., Gilman, H., and Beaber, N. J., [preparation of] n-butyl p-toluenesulphonate, A., 1052.

Roos, L., examination of damaged wines, B., 619.

Roos, O. See Goy, S.

Roos, R., and Roessler & Hasslacher Chemical Co., sodium sulphide pellets, (P.), B., 245\*.

Roper, W. See Rodwell, A. G. Rosa, J. T., changes in composition during ripening and storage of melons, B., 375.

Rosanov, S. N., solubility of phosphorites at different hydrogenion concentrations, and their assimilability by plants, B., 616.

Roschier, H., importance of aluminium sulphate in paper manufacture, B., 91.
Roschier, R. H. See Komppa, G.

Roscoe, M. H. See Aykroyd, W. R., and Chick, H.

Rose, A. See Burgess, W. M. Rose, A. R. See Exton, W. G.

Rose, C. L. See Swanson, E. E.

Rose, E. S., testing some common antiseptics, B., 226.

Rose, G. E., regenerative furnace, (P.), B., 799.

Rose, L., cane molasses and solid sugar-cane juice, B., 790.

Rose, R. E. Sco Du Pont de Nemours & Co., E. I. Rose, R. P., Cude, H. E., and General Rubber Co., saturating paper, (P.), B., 469.

Rose, R. P. See also Mechanical Rubber Co.

Rose, W. B., and Stucky, C. J., micro-determination of chlorides in blood, A., 1478.

Rose, W. B. See also Stucky, C. J.

Rose, W. C. See Berg, C. P., and Jackson, R. W.

Rosecrans, C. Z., air-gas ratio apparatus, B., 766.

Rosedale, J. L., amino-acids of flesh. III. Diamino-acid content of fish, A., 590.

Rosedale, J. L., and Oliveiro, C. J., antineuritic vitamin. II.

Properties of the "curative" substance, A., 104.

Roselius, W. See Schiemann, G.

Rosen, B., diffuse molecular spectra, A., 119. Rosen, B. See also Carrelli, A., and Wolff, Hans.

Rosenbach, J. See Mayer, Fritz.

Rosenbaum, M.K. See Friedensen, M. Rosenbaum, R.R., fuller's earth treating process, (P.), B., 121\*. reclaiming waste oil, (P.), B., 770.

Rosenberg, A. See Bobtelsky, M. Rosenberg, S. J. See French, H. J. Rosenberg, W. See Hodgson, H. H.

Rosenblatt, M., and Mordkovitsch, M., influence of some metals on acetic acid fermentation, A., 1108.

Rosenblum, S., loss in velocity of a-particles in passing through metal foils, A., 6.

passage of a-rays through matter, A., 233.

fine structure of the magnetic spectrum of the a-rays from thorium-C, A., 738.

fine structure of the magnetic spectrum of a-rays, A., 863.

Rosenbohm, A. See Bierich, R. Rosencrants, F. H. See Internat. Combustion, Ltd.

Rosenfeld,  $G_{\cdot \cdot}$ , methods for the determination of fat, A., 110. pathological fat formation. I. Docs fat arise from protein?

A., 1104. pathological fat formation. II. The problem of lecithin,

A., 1337. Rosenfeld, L., refractive index of electrons and diamagnetism,

A., 232. quantum mechanical theory of the natural optical activity of liquids and gases, A., 491.

Rosenhain, W., methods of research in physical metallurgy, B., 922.

Rosenhain, W., and Prytherch, W. E., improved form of electric resistance furnace, B., 288.

8\*

Rosenheim, A., adsorbing agent, (P.), B., 54.

production of base-exchanging substances, (P.), B., 322.

manufacture of adsorbing agents, (P.), B., 642.

removal of dissolved silicic acids from liquids, especially water for domestic or industrial uses, (P.), B., 798.

softening of water and removing iron and manganese therefrom by base-interchange, and preparing the requisite agent therefor, (P.), B., 962.

Rosenheim, A., and Daehr, H., uranium tetroxide dihydrate, A., 1027.

Rosenheim, A., and Zilg, H., molecular formula and constitution of hypophospheric acid, A., 148.

Rosenheim, O., specific colour reaction for ergosterol, A., 359. Rosenheim, O., Schuster, E. H. J., and Tintometer, Ltd., colourestimating apparatus, (P.), B., 4.

Rosenheim, O., and Webster, T. A., biological inertness of irradiated mycosterols other than ergosterol, A., 105.

absorption spectrum of vitamin-A, A., 1202.

Rosenheim, O. See also King, Harold.
Rosenkranz, E. See Hüttig, G. F.
Rosenmund, K. W., and Lohfert, H., synthesis of polyphenolic ketones, A., 188.

Rosenmund, K. W., and Rosenmund, M., synthesis of naringenin and phloretin, A., 325.

Rosenmund, M. See Rosenmund, K. W.

Roseno, A., activation of pancreatic lipases in serum by leucylglycylglycine; modification of Rona's test, A., 723.
Rosenstein, L. See Hagens, J. F. C., and Morgen, R. A.

Rosental, S., dielectric constant of supercooled sulphur and of some solutions of sulphur, A., 242.

Rosenthal, A. See Walbaum, H.

Rosenthal, H. See Tschirch, A.

Rosenthal, (Miss) J. E., and Jenkins, F. A., quantum analysis of the beryllium oxide bands, A., 376.

perturbations in band spectra. I., A., 866.

Rosenthal, O., lactic acid fermentation of warm-blooded tissue.

I. Conditions for obtaining "extra" fermentation with liver tissue, A., 722.

lactic acid fermentation of warm-blooded tissue. II. Effect of potassium and calcium ions on the existence of the extrafermentation of salivary gland and liver tissue of rats, A., 1337.

See also Lasnitzki, A. Rosenthal, O.

Rosenthal, S. M., and Ziegler, E. E., effect of uncooked starches on the blood-sugar of normal and of diabetic subjects. II., A., 1331.

Rosenthaler, L., moreuri-compounds from purine derivatives. II. [Caffeine], A., 203. precipitation of carbohydrates and glucosides by alkaloid

precipitants, A., 297. Van Slyke's method [for the determination of amino-acids],

A., 713. microchemical detection and localisation of glucosides, A.,

1498. destruction of the oxidising enzymes of gum arabic, B., 412. reaction of "barbaloin" and aloes, B., 869.

Roseveare, W. E., and Olson, A. R., thermal reaction between potassium oxalate and mercuric chloride, A., 888.

Rosewarne, P. V., and Connell, G. P., dehydration of bitumen emulsion from Alberta bituminous sands, B., 42.

Rosewarne, P. V. See also Gilmore, R. E.

Roshirt, R. J., and Bohn Aluminium & Brass Corporation, heat treatment of aluminium castings, (P.), B., 562.

Rosin, J. See Collins, W. D.

Rosin, P., spontaneous combustion of semi-coke from brown coal: its causes and prevention, B., 230.

Rosin, P., and Just, H., determination of phenols in effluent from the carbonisation of lignite, and their extraction, B., 966.

Roske, G., conditions of amine production by B. coli, A., 1342.

Rosling, C. G. See Davis, R. H.

Rosner, G. A. See Jellinek, K.
Ross, C. S., Shannon, E. V., and Gonyer, F. A., origin of nickel silicates at Webster, N.C., A., 1418.
Ross, D. W., and Lambie, J. M., manufacture of ceramic articles,

(P.), B., 130.

repairing of refractory walls, (P.), B., 941. Ross, D. W. See also Lambie, J. M.

Ross, J. See Morgan, G. T.

Ross, J. F., and Crabtree, J. I., developer fog from metal of tanks, B., 623.

Ross, J. G.See Martus, M.L.

Ross, W. H., Merz, A. R., and Jacob, K. D., preparation and properties of the ammonium phosphates, B., 431.

Ross, W. H. See also Mehring, A. L.

Rossander, S. S., and Marvel, C. S., s-diphenyltetratert.-butylethinylethane, A., 688.

Rossati, G. M., and De Blasio, G., artificial wool, (P.), B.,

Rosseland, S., viscosity in the stars, A., 117.

stellar spectra in the far ultra-violet, A., 223.

ozone absorption during the long Arctic night, A., 624.

Rosselli. D. See Viale, G

Rossem, A. van, and Dekker, P., oxidation of vulcanised rubber, B., 220.

Rossem, A. van, and Lotichius, J., freezing of raw rubber. I., B., 219.

Rosser, R. J. Sec Plant, S. G. P.

Rossi, B., Raman effect and negative absorption, A., 626.

Rossi, C. See Nasini, A. G.

Rossi, G., and Marescotti, A., refractive index of colloidal solutions of sulphur, A., 1004.

surface tension and stability of colloidal solutions, A., 1005. coagulation of colloidal solutions, A., 1007.

Rossi, G. See also Gennaro, U., and Plancher, G.

Rossi, R., detection of cobalt and nickelin presence of phosphates and identification of magnesium in presence of cobalt and nickel, A., 1160.

Rossier, P. H., isoelectric point in the blood, A., 1482.

Rossier, P. H., and Luchsinger, R., changes in the isoelectric point of the serum in syphilis, A., 1482.

Rossini, F. D. See Eckman, J. R., and Randall, M. Rossiter, E. C. See Brit. Cyanides Co., Ltd.

Rossteutscher, F. See I. G. Farbenind. A.-G.

Rostkovski, A. P., double decomposition in the absence of a solvent. VIII. Unusualirreversible system TINO2+KBr—> TlBr $\longrightarrow$ KNO, A., 651.

double decomposition in the absence of a solvent. IX. System  $AgCl+KI \longrightarrow AgI+KCl, A., 1012.$ Rostosky, L., and Lüder, E., physico-chemical principles of

soldering, B., 212.

Roszak, C., low-temperature carbonisation of fuels by the Héreng process, B., 344.

Roth, C. C., (Grahn, W.), and Peat Products Co., manufacture of paper from peat, (P.), B., 811.

Roth, E. W., normal-pressure hydrolysis of acid sludge, (P.), B., 466.

Roth, O. See Moldenhauer, W. Roth, W. A., thermochemistry of iron, manganese, and nickel, A., 1389.

revision of thermal data, A., 1389.

Roth, W. A., and Bertram, W., specific heats of important metallurgical substances, A., 990.

Roth, W. A., and Eymann, C., methods of calorimetry and the

question of allotropy in the case of heats of dissolution of potassium nitrate and chloride, A., 1238.

Roth, W. A., and Müller, Fr., heat of decomposition of azoimide, A., 755.

Roth, W. A. See also Kobel, M.

Roth, W. O., unimolecular reaction in aqueous solution which can be followed thermometrically, A., 655.

Rothe, F., Brenek, H., and Rhenania-Kunheim Verein Chemischer Fabriken Akt.-Ges., manufacture of glass containing barium, (P.), B., 96\*.

preparation of fertilisers, (P.), B., 223\*, 371\*.

Rothen, A. See Levene, P. A.

Rothenheim, C. A., examination of Peru balsam by the extended capillary diagram and the analytical quartz lamp, B., 660.

Rother, F., electron-discharge device, (P.), B., 985. Rother, F., and Münder, E., emission of electrons from metals. A., 369.

Rothgeb, B. E. See Coleman, D. A.

Rothlin, E., Müller, Fritz, and Chemische Fabrik vorm. Sandoz, emetine derivatives for therapeutical purposes, (P.), B., 37.

Rothlin, E. See also Burckhardt, E. Rothmann, H. See Horsters, H. Rothrock, H. S. See Nelson, R. E.

Rothschild, K. See Jander, W.

Rothschild, P., specific inhibitions of lipase, especially by fluoride,

diffusion experiments with the phosphorus-containing compounds of muscle, A., 1484.

Rothstein, B. See Palfray, L. Rothstein, E. See Ingold, C. K.

Roudnick, J., electrodeposition of chromium from aqueous solutions of chromic acid, A., 774, 1247.

preparation of potassium permanganate by electrolysis, A.,

Rouin, G., resin acids, A., 696, 811; B., 219.
Roulier, C., and Dubreuil, R., preparation of cmodin, B.,

Rounsefell, E. O. See Hume-Rothery, W., and Lange, E. Roush, G. A., table of electrochemical equivalents, A., 753.

Rousseau, E., displacement of iodine from an iodide by a solution in oil of cholesterol or ergosterol irradiated by solar light, A., 895.

oxidising action of solar light on a solution of zymosterol in oil, A., 1024.

photochemical oxidising power of cholesterol and ergosterol after irradiation with mercury arc light, A., 1065.

Rousseau, M., report of tests at the [olive oil] experiment station at Ghaba, B., 442.

Rousseau, S. See Javillier, M. Roussel, G. See Rousseu, B. Rousseu, B., Gruzewska, Z., and Roussel, G., amylase of horseserum and the variation of its activity as a function of successive bleedings, A., 1325.

influence of hydrogen-ion concentration of the medium on the amylase activity of horse serum, A., 1476.

Routala, O., and Sevón, J., manufacture of sulphite-cellulose from pinewood, B., 592.

Routt, O.L. See Greenleaf, R.M.

Roux, A., and Cournot, J., X-ray study of the internal transformation of silver-zinc alloys, A., 756.

internal transformations of a cupro-aluminium, B., 174.

conjugated influence of velocity of deformation and temperature in cold-hardening process [of aluminium], B., 327.

Roux, A. See also Cournot, J., and Guillet,  $\hat{L}$ .

Rouyer, E. See Bourion, F.
Rowe, F. M. See Bean, P., jun.
Rowell, S. W. See also Golding, H. D., Hirst, H. S., and Imperial Chem. Industries, Ltd.

Rowen, R. W. See Kern, E. F.

Rowland-Entwistle, A., production of metallised [silvered] surfaces, (P.), B., 857.

Rowlands, J. R. See Briscoe, H. V. A.

Rowlands, M. I., vitamin contents of grass seeds from treated

plots, A., 1496. Rowles, W. See Foster, J. S.

Rowntree, L. G. See Green, C. H.

Rowntree & Co., Ltd. See Fernbach, A.

Roxana Petroleum Corporation. See Tijmstra, S.

Roy, G. C. See Das-Gupta, P. N. Roy, (Miss) S., influence of light on some colloids, A., 1006.

Royen, H. J. van, manufacture of steel, (P.), B., 360.

Royen, M. J. van. See Spoelstra, D. B.

Royer, L., possible dissymmetry of corrosion figures obtained by an active isotropic liquid, A., 631.

corrosion of a crystal of dolomite by an active isotropic liquid, A., 750.

Royer, M., urobilin in organs, A., 838. determination of urobilin, A., 949.

Rozanov, S. N., colorimetric determination of phosphoric acid, by Deniges' method, A., 1158.

Rozenberg, A. M. See Efremov, N. N.

Rozhkova, E. V., diatomaceous earth, A., 1163.

Rózsa, P., gravimetric determination of colocynthin in extractum colocynthidis, B., 226.

Ruark, A. E., Heisenberg's indetermination principle and the motion of free particles, A., 1360.

Rubber Cultuur Maatschappij "Amsterdam," treatment [separation of pericarp and nuts ] of palm fruit, (P.), B., 690.

Rubber Growers' Association, Inc., Martin, G., and Davey, W., preservation of india-rubber, (P.), B., 29.

Rubber Latex Research Corporation, concentration of [rubber]

latex, (P.), B., 828. Rubber Latex Research Corporation. See also Day, M. R., and Wescott, W. B.

Rubber Service Laboratories Co., vulcanisation of rubber, (P.),

Rubber Service Laboratories Co., and Scott, W., vulcanisation of rubber, (P.), B., 829.

Rubber Service Laboratories Co. See also Bartram, T. W., Hand, C. N., Horst, W. P. ter, Maude, A. H., North, C. O., Roberts, H. P., and Scott, W. Rubel, W. M. See Astanin, P. P.

Ruben, S., photosensitive cell, (P.), B., 217.

photo-electric cell, (P.), B., 217. leading-in conductor, (P.), B., 253.

promotion of chemical reactions [between gases], (P.), B., 432. electrical [electrolytic] condenser, (P.), B., 527.

electrical condenser, (P.), B., 606. electrostatic condenser, (P.), B., 649.

Rubenstein, B. B. See Navez, A. E.

Rubes, T. See Bures, E.

Rubin, B. See Kiesel, A.

Rubino, F. See Garino, M.

Rubino, P., Collazo, J. A., and Varela-Fuentes, B., glycogen content of the liver and muscle of rabbits; comparison of insulin and decamethylenediguanidine (synthalin), A., 357.

effect of insulin and synthalin on the glycogen content of the liver and muscle, A., 851.

intensity and polarisation of forbidden lines, A., 615.

Rubinstein, H., manufacture of sodium magnesium carbonate, (P.), B., 206.

Rubinsztein, T. See Fogel, L. Rubio, J. V. See Bary, P.

Ruchti, accuracy of the determination of viscosity of oils and varnishes by the [rising] bubble method, B., 482 determination of oil absorption of pigments, B., 609.

Rud, E. See Gram, C. N. J., and Lundsgaard, C.

Ruda, G. W., and Aktiebolaget Baltic, reduction of froth formation at centrifugal liquid separators, etc., (P.), B., 740.

Rudat, A. Sec Jellinek, K. Rudberg, E., production and absorption of soft X-rays and

secondary electrons, A., 13.

Rudd, R. D. See Parmelee, C. W.Ruder, W. E. See Gen. Electric Co.

Ruderman, A., paper-coating composition, (P.), B., 811.

Rudolfs, W., chemical changes during the life cycle of the tent caterpillar (Malacosoma americana, Fab.). III. Soluble ash and sulphates, A., 599.

sewage sludge as fertiliser, B., 152.

chemical and biological correlations in a polluted stream,

Rudolph & Kühne Ges.m.b.H., apparatus for drying webs of woven material, (P.), B., 353.

Rue, H. P., and Beall, I. N., crude oil produced in the Salt Creek

Field, Wyoming, B., 1038.
Rue, J. D., Wells, S. D., and Rawling, F. G., fibrous material for odourless containers, (P.), B., 848.

Rüchardt, E., simple method for determining  $C_p/C_v$ , A., 497. Rückert, M. See Skrabal, A. Rüdel, O., phase rule and Euler's law, A., 247.

Rüdiger, M., and Mayr, E., wine refining, B., 261.

behaviour of alcoholic distillates in ultra-violet light, B., 954.

Ruedy, J. E. See Gibbs, R. C.

Ruedy, R., electrical conductivity of metals, A., 20.

free and bound electrons in metals, A., 232.

band spectra, A., 1120.

Rnedy, R. See also McLennan, J. C.

Rünzi, O., differentiation of viscose and copper-silk, B., 1010. Rüping, H. See Pteiffer, P.

Ruer, R., and Kremers, K., determination of temperature of completion of solidification of mixed crystal series by heating curves, A., 1229.

Rüsberg, F., Schmid, P., and Kali-Chemie A.-G., recovery of zinc oxide, (P.), B., 1020\*.
Rüter, R. See Berliner, E.

Rütgerswerke Akt.-Ges., and Kahl, L., recovery of calcium ferrocyanide from gas-purification residues, (P.), B., 9.

Bütgerswerke Akt.-Ges., and Müller, R., separation of diphenylene oxide from coal tar, (P.), B., 233

Ruf, K., some physical constants of pure, carbon-free chromiumiron and vanadium-iron alloys, A., 500.

Ruff, O., high-temperature technique and new fluorides, A., 1161.

Ruff, O. [with Fischer, J., Luft, F., Ascher, E., Lass, F., and Volkmer, H.], new fluorides, especially chlorine fluoride, A., 160.

Ruff, O., and Ascher, E., fluorides of group VIII of the periodic system, A., 1254.

Ruff, O., and Asoher, E. [with Fischer, J., and Laass, F.], chloring fluoride, A., 40.

Ruff, O., and Ebert, F., ceramics of highly refractory substances. Forms of zirconium dioxide, B., 474.

Ruff, O., Ebert, F., and Stephan, E., ceramics of highly refractory substances. II. System ZrO<sub>2</sub>-CaO, A., 650.

Ruff, O., Ebert, F., and Woitinek, H., ceramics of highly refractory substances. III. System ZrO<sub>2</sub>-ThO<sub>2</sub>, A., 766.
Ruff, O., and Fischer, J., iridium fluorides, A., 527.

Ruff, O., and Lass, F., constants of chlorine fluoride, A., 1226. Ruggli, P., and Henzi, E., glyoxaline fission products. II.

Production of a glyoxaline solution and glyoxaline fission product, A., 827.

Ruggli, P., and Merz, E., anthracene derivatives. III. Derivatives of 2-methylanthraquinono and anthrafiavone, A., 318.

Ruggli, P., Ratti, R., and Henzi, E., glyoxaline fission products. I. Benzoyl derivative of diaminoethylene and its conversion into a glyoxalone, A., 826.

Ruhemann, M., and Simon, F., physical properties of rubber, B., 29.

Ruhemann, M. See also Simon, F.

Ruhland, W., and Wetzel, K., physiology of the organic acids in green plants. III. Rheum hybridum hort., A., 477.

Ruigh, W. L., sensitive test for magnesium, A., 783. Ruiz, C., derivatives of 2-hydroxyfiuorene I. and II., A., 1063, 1291.

directive effects in the diphenyl and fluorene series, A., 1170. oxidation of 2:7-diaminofluorene, A., 1438.

Rule, A., and Imperial Chemical Industries, Ltd., destructive hydrogenation of solid carbonaceous material, (P.), B., 705.

Rule, A., Watts, H. G., and Imperial Chemical Industries, Ltd., obtaining light hydrocarbon oils from tar sands, (P.), B., 842. Rule, A. See also Synthetic Ammonia & Nitrates, Ltd.

Rule, H. G., and MacGillivray, W. E., optical activity and polarity of substituent groups. X. Influence of ionisable groups on

rotatory power of *l*-menthyl benzoate, A., 570.

Rule, H. G., Miles, J. B., and MacGillivray, W. E., optical activity and polarity of substituent groups. XI. sec. β-Octyl esters of benzoio acids containing basio and acidio substituonts, A.,

Rulon, W. B., formation [of reconstructed] carbonaceous fuel, (P.), B., 10\*

Rumford Chemical Works. See Edwards, R. S.

Rumpel, H. H., and Smith Engineering Works, crusher, (P.), B., 78, <u>6</u>64.

Rumpi, E., ultra-violet luminescence of calcium oxido and calcium sulphide excited by X-rays, A., 9.

lattice constants of calcium oxide and calcium hydroxide, A., 12. Rumpff, H., condenser chronograph [for explosives], B., 228.

Runback, K. G. See Jordahl, A. Runchjelm, D. See Euler, H. von.

Runge,  $H_{\cdot,\cdot}$  and Schmidt,  $H_{\cdot,\cdot}$  membrane studies with the human

amnion, A., 342. Runge, W. See Coal Oil Extraction, Ltd., and Internat. Com-

bustion Engineering Corporation.

Runk, C. R., soil acidity, B., 30.

Runkel, R., and Verein für Chemische Industrie A.-G., production of cellulose from highly-lignified plants, (P.), B., 976\*.

Runow, E., biological production of nitrite in organic media, A., 1342.

Ruoss, H., accuracy of titrations, critical concentration of the burette liquid, and sensitivity of indicators, A., 782.

Rupard, E. B., and Armour Fertilizer Works, nitre oven, (P.), B., 516.

Rupe, H., and Gassmann, A., aldehydes from acetylenic carbinols. IV. 3-Methyl-6-isopropylcyclohexylideneacetaldehyde, A., 314. Rupe, H., and Hirschmann, H., camphane-2-carboxylic acid and

camphanyl ketones, A., 190.

Rupe, H., and Pieper, B., catalytic hydrogenation of cyanocompounds; reduction of ethyl phenylcyanopyruvate, ethyl benzoylcyanoacetate, and ethyl benzylidenecyanoacetate, A., 938.

Rupp, E., polarisation of canal-ray light. II. The accompanying emission of H<sub>B</sub> in various arrangements of the field, A., 5. diffusion of electrons, A., 115\*.

polarisation of canal-ray light. III. Mercury positive rays of the line 2537 A., A., 226.

polarisation of electron waves, A., 483.

electron deflexion by metallic films, A., 619.

electron reflexion and deflexion at unicrystalline surfaces, A., 619.

transmission and reflexion of slow-moving electrons by metals, A., 862, 1357.

investigation of adsorbed layers with electron-waves, A., 1357.

Rupp, E., and Lewy, F., titration of tin with "chloramine," A., 671.

Rupp, G. A., and Trojan Powder Co., explosive, (P.), B., 998. Rupp, P. See Frazier, W. C.

Ruppel, O. See Usines de la Basse-Meuse, Soc. Anon.

Ruppersberg, H. See Koller, G.

Ruppin, E., wine distillates and wine brandies, B., 573.

Ruprecht, L., and Kollstede, Akt.-Ges., grinding machine, (P.), B., 452.

Rusby, J. M., Andrews, C. W., and U.G.I. Contracting Co., gasification of solid fuel, (P.), B., 932.

Rusby, J. M., and U.G.I. Contracting Co., gasification of bituminous coal, (P.), B., 842. Rusby, J. M. See also Humphreys & Glasgow, Ltd.

Rusch, A. See Angel, F. Rusch, M. See Täufel, K.

Ruschmann, G., biological and chemical examination of stall manures. IV. (Pt. 2), B., 410.

fundamental principles of the preparation of artificial fertilisers, B., 831.

Rushton, A. L., Simpson, M. M., Beckman, H. C., and Cream Processes, Inc., treatment of sour cream, (P.), B., 1030. treatment of soured or curdled milks for recovery of butter

fat therefrom, (P.), B., 1030.

Rushton, J. L., Lever, J., and Hill, H., washing, bleaching, and similar machines, (P.), B., 354.

Russ. E. F., induction furnace, (P.), B., 289. induction [melting] furnace, (P.), B., 360.

Russ, W. Sec Dede, L.

Russell, A., and Stewart, A. W., Tesla-luminescence spectra. VII. Some aromatic aldehydes, A., 1364.

Russell, A. Sec also Macmaster, J. C. Russell, A. S., order of removal of metals from amalgams. A., 1402.

Russell, A.S. See also Jackson, K.S., and Merrill, J.L.

Russell, H. N., arc spectrum of nickel, Ni 1, A., 1351. Russell, H. N., and Bowen, I. S., is there argon in the corona? A., 1359.

Russell, H. N., Shenstone, A. G., and Turner, L. A., notation for atomic spectra, A., 967.

Russell, H.N. See also Meggers, W.F.

Russell, M. E. See Jones, L. A.
Russell, T. F., low-expansion nickel steel, B., 981.

Russell, W. C., Massengale, O. N., and Howard, C. H., duration of effect of ultra-violet irradiation of chickens, A., 105.

Russell, W. F., early experiments with stearic acid in rubber compounding, B., 827.

Russell-Wells, B. See Haas, P.

Russo, G., metabolism of the hexone bases and the origin of the purine nucleus in the development of hen's eggs, A., 1334.

Rusznýák, S., and Erdős, J., gravimetric and nephelometric determination of protein fractions of blood, A., 587.

Rutgers, A. J. See Ehrenfest, P.

Ruth, R., colour photography, (P.), B., 961.

Ruth-Aldo Co., Inc., and Barthelemy, H. L., absorbing and recovering the vapours of volatile liquids, (P.), B., 269. acetylation of cellulose; production of cellulose esters, (P.),

B., 429.

manufacture of artificial threads, bands, films, etc., from solutions of cellulose esters and ethers, (P.), B., 513.

manufacture of artificial threads, bands, films, etc., from solutions of cellulose esters and others; manufacture of cellulose esters, (P.), B., 595.

manufacture of threads, ribbons, films, etc., from solutions of cellulose esters or ethers, (P.), B., 714. homogeneous esterification of cellulose, (P.), B., 714.

esterification of cellulose, (P.), B., 714.

Ruth-Aldo Co., Inc., and Barthelemy, H. L., softening of cellulose fibres to facilitate their acetylation, (P.), B., 892. acetylation of cellulose, (P.), B., 1011.

Ruth-Aldo Co., Inc., and Klein, (Miss) M., apparatus for spinning artificial threads, (P.), B., 280, 774\*.

apparatus for spinning solutions of cellulose ethers or esters, (P.), B., 595, 893.

Ruth-Aldo Co., Inc., and Orioli, E., nozzles for spinning artificial silk, (P.), B., 470.

Ruth-Aldo Co., Inc., and Thenoz, R. A. J., devices for stretching artificial threads made by the dry-spinning method, (P.),

Ruth-Aldo Co., Inc. See also Klein, (Miss) M.

Rutherford, (Sir) E., origin of actinium and the age of the earth, A., 373.

the structure of atomic nuclei, A., 622.

Rutherford, (Sir) E., and Chadwick, J., energy relations in artificial disintegration, A., 621.

Rutherford, K. H. See Plant, S. G. P.

Ruths, J., and Ruths Accumulator Aktiebolaget, bleaching of paper pulp, (P.), B., 280.

Ruths Accumulator Aktiebolaget, heat accumulators, (P.), B., 625. Ruths Accumulator Aktiebolaget. See also Ruths, J.

Rutovski, B., and Gusseva, K., essential oil of Trilobum sup. siler, B., 148.

Caucasian Thuja oils, B., 537.

Rutovski, B., and Korolev, A., electrolytic reduction of salicylic acid, A., 811.

derivatives of perillaldehyde, A., 819.

Rutovski, B., and Makarova-Semljanskaja, N., Caucasian bay leaf oil, B., 112.

Rutovski, B., and Makarova-Semljanskaja, N. [with Vinogradova, I. V.], oil containing geraniol, B., 493.

Rutovski, B., and Prokoptschuk, N., essential oil from the leaves of Rhus cotinus, B., 537.

Rutovski, B., and Vinogradova, I. V., essential oil of Cachrys alpina, MB., B., 112.

composition of pine-needle oil from Crimean Pinus halepensis, Mill, B., 536

essential oils of Heracleum villosum, Fisch, B., 660. borneol values of the Siberian pine oil of Altai, B., 660. essential oils from Caucasian Citrus species, B., 660.

essential oils of leaves and stems of camphor from the Sukhum district, B., 660.

essential oils of Crimean junipers, B., 660.

essential oils of Crimean salvias, B., 660. essential oils of Abies nordmanniana, Spach, and Abies cephalonica, Link, B., 660.

essential oil from Artemisia annua, L., B., 660.

essential oils of Caucasian and Crimean Thymus, B., 910.

Caucasian eucalyptus oils, B., 910. Rutschkin, V., negative autoxidation catalysts for fatty oils,

B., 292. Rutzler, J. E. See Lee, A. P.

Rutzler, J. E., jun., test for neutral oil in soap or fatty acids, B., 902.

Ruyer, A. See Bedos, P.

Ruyssen, R. See Pinkus, A.

Ruyter, E., compound asbestos-cement sheets and slabs, (P.), В., 777.

Ruzioka, C., machine for making transparent paper or sheet cellulose from aqueous cellulose solutions, (P.), B., 14. production of cellulose acctate and mixed cellulose esters con-

taining acetyl and other carboxylic radicals, (P.), B., 202. machine for making sheet cellulose from aqueous cellulose

solutions, (P.), B., 204. light-sensitive cell, (P.), B., 726.

spinning nozzles for manufacture of artificial silk, (P.), B., 848.

production of cellulose esters, (P.), B., 892.

apparatus for manufacture of artificial silk by the dry-spinning method, (P.), B., 892.

Ruzicka, L., products with an odour of musk and carbon rings containing a large number of linkings, A., 315.

Ruzicka, L., and Hosking, J. R., higher terpene compounds. XXXVII. Agathicdicarboxylic acid, the crystalline resin acid, C20 H30 O4, of Kauri, hard and soft Manila copals, A., 572.

Ruzicka, L., Huyser, H. W., Pfeiffer, M., and Seidel, C. F., higher terpene compounds. XXXVIII. Amyrins and lupeol,

Ruzicka, L., and Melsen, J. A. van, higher terpene compounds. XXXIX. Cedrene, A., 932.

Ruzicka, L., and Naef & Co., M., preparation of monocyclic ketones and their alkyl derivatives having more than nine ring members, (P.), B., 340\*.

increasing the yield in civetone, starting from civet, (P.), B., 797\*.

Ruzicka, L., and Stoll, M., carbon rings. XIII. Oxidation of thirteen- to seventeen-membered monocyclic ketones with Caro's acid to fourteen- to eighteen-ring lactones, A., 67.

Ruzicka, L., Stoll, M., and Sehinz, H., carbon rings. Ketones with nineteen-, twenty-one-, and twenty-nine-mem-

bered rings, A., 68.

Ruzicka, L., and Veen, A. G. van, higher terpene compounds.

XXXV. Constitution of bisabolene, A., 571.

higher terpene compounds. XXXVI. Constitution of zingiberenc, A., 572.

saponins, sapogenins, and related substances. I. Trimethylnaphthalene from gypsogenin, A., 1305. saponins, sapogenins, and related substances. III. Relation

between sapogenins, higher terpene compounds, and sterols, A., 1305.

Ruzicka, L., Veen, A. G. van [with Korver, D., Kamp, J. van der, and Wigman, H. J.], higher terpene compounds. XL. Constitution of clemol, A., 1457.

Ruzicka, W., acidity measurements of the higher fatty acids by the iodometric method, A., 1271.

Ruzicka, W. Sce also Hönig, M., and Margosches, B. M. Ryan, H., and Casey, M. T., action of aromatic amines on alkyl nitrates, A., 690.

Ryan, H., and Doyle, R. J., periodic precipitations with diffusion, A., 1378.

Ryan, H., Keane, J., and Dunne, J., determination of diphenylamine and diphenylnitrosoamine in the presence of their derivatives, B., 454.

Ryan, H., and Lennon, J. J., action of alcoholic hydrochloric acid on diphenylmethyltetrahydropyrone, A., 703.

Ryan,  $\hat{H}$ . See also Doyle, R.J.

Ryan & Co., F. J. See Beach, G. F. Rydberg, R. See Bengtsson, E. Rydbom, M. See Euler, H. von.

Ryde, J. W. See Asundi, R. K.

Rys, L. See Votoček, E.

Rysselberge, P. J. van. See Lee, W. B., and McBain, J. W.

S.

S. E. Co. See Wallace, G. W.

S. & T. Metal Co. See Shoemaker, R. J. Saar, R., rapid refractometric analysis of brandy and fortified

brandy, B., 145. Sabalitschka, T., reversal of Traube's rule in adsorption of

homologous compounds by sugar charcoal, A., 502. relationship between the physical properties of chemical

substances and their action on micro-organisms, A., 724. preservatives; detection and pharmacology of alkyl p-hydroxybenzoates, B., 909.

Sabalitsehka, T., and Jaeobson, H., disinfecting, (P.), B., 912. Sabalitsehka, T., and Weidlich, R., malt amylase. V. Determination of the power of amylase to convert starch into dextrins and sugars and a comparison of the two reactions, A., 721.

malt amylase. VI. Adsorption of amylase by blood-charcoal and kaolin at varying  $p_{it}$  with reference to its dextrinising and saccharifying powers, A., 1197.
malt amylase. VII. Adsorption of amylase from malt extracts

by kaolin and elution [of the amylase therefrom], A., 1337.

Sabavin, V. See Stadnikov, G. L. Sabetay, S., preparation of styrene (with a note on the detection

and identification of  $\beta$ -phenylethyl alcohol), A., 440. ketones and acids containing the alkoxy-group, A., 1174.

Sabetay, S., and Bleger, J., [aliphatic (open-chain) hydroterpenes], A., 1164.

Sabetay, S., and Schving, P., formals and mixed carbonic esters, A., 309.

Sabinin, D. A., and Kolotora, G. S., passage of ash-substance into the plant. 1. Reaction of the medium as a factor in the mineral nutrition of plants, B., 759. Sabojev, S. See Salkind, J.

Sachanen. See Sachanov.

Sachanov, A. N., composition of heavy Sakhalin crude oils and

their working up, B., 384.

Sachanov, A. N., and Bestuschev, M., Maikop oils, B., 118. cracked residues and cracked oil distillates, B., 967.

Sachanov, A. N., and Doladugin, A. I., stabilising Grozni casinghead gasoline, B., 1004. Sachanov, A. N., and Tilitscheev, M. D., fundamental factors of

liquid-phase cracking, B., 84.

cracking of petroleum products, (P.), B., 348. cracking process, B., 383.

Sachanov, A. N., and Vassiliev, N. A., mol. wt. and b. p. of mineral oils, B., 85.

Sachanov, A. N., and Zherdeva, L. G., paraffin wax in Apsheron crude oils, B., 504.

Sachs, G., tensile properties of crystals of aluminium alloys which undergo age-hardening, B., 99.

Sachs, G., and Fürst, K., mercurated nitrobenzenes, A., 1472. Sachs, G. See also Göler, (Frl.) von, Karnop, R., and Masima, M. Sachse, H., fusion calorimeter, A., 1161.

thermal changes accompanying the spontaneous contraction of raw rubber, B., 651.

Sachse, R. See Schilling, A. Sachsse, H. See Ettisch, G. Sachtleben, R. See Hönigschmid, O.

Sack, A. See Eder, R.

Sack, H. See Brendel, B. Sacks, J. See Davenport, H. A.

Sadd, J. A., gas masks, respirators, etc., (P.), B., 266. Sadikov, V. S., hydrolysis of proteins by ammonia under pressure, A., 586.

tannins and non-tannins of tanning extracts; new theory of tanning, B., 864.

Sadikov, V. S., and Golovtschinskaya, E. S., influence of age on the composition of the lipin fraction in the animal organism, A., 211.

Sadikov, V. S., and Michailov, A. K., hydrogenation of fluorene under pressure with nickel or osmium as catalysts, together with traces of cerium and thorium oxides, A., 307\*.

by-products of the hydrogenation of quinoline under pressure in presence of osmium and cerium oxides as catalysts, A., 327.

Sadler, H. See Suida, H.

Sadler, J. B. See Sadler, W.

Sadler, W., Streptococcus lactis strain that produces "caramel" odour and flavour in dairy products, B., 300.

Sadler, W., and Sadler, J. B., covers for low-pressure kiers, (P.), B., 354.

Sadler, W. See also Barthel, C.

Sadolin, E., arsenic in fish, A., 91.

conditions for the determination of cocaine in physiological material, A., 949.

stability of solutions of cocaine and  $\psi$ -cocaine, B., 112.

Sadtler, H. S., transference of dyestuffs to fabrics, (P.), B., 280. Saeger, C. M., jun. Sco Harrison, W. N.

Saegusa, II., and Shimizu, S., anomalous after-effect with quartz,

Saem, J., and Sanchez, B., a homologue of ephedrine, A., 808. Sängewald, R. Sec Weissberger, A.

Safety Car Heating & Lighting Co. See Vuilleumier, R.

Safety Mining Co., blasting cartridges, (P.), B., 700. Sagaidatschni, A. F. See Iljinski, V. P. Sager, G. F. See Ellis, W. C.

Sagramoso, G., electric furnace, (P.), B., 24.

Sagui, C. L., doublet separation of Balmer lines and the molecule of hydrogen in relation to the electromagnetic quantum theory, A., 1349

ionisation potential of hydrogen atoms from the point of view of the electromagnetic quantum theory and polarisation of light from canal rays, A., 1356.

Sagulin, A. B. [with Riabinin, G., Proskurnin, and Kowalski, A.], explosion temperature of gas mixtures at various pressures, A., 147.

Sagulin, A. V. See Leipunski, A. J. Sah, P. See Abderhalden, E.

Saha, J. M. See Chakravarti, G. C.

Saha, M., and Kothari, D. S., theoretical expression for the life of the atom in the metastable state, A., 622

Sahashi, Y., synthesis of 4(or 5)-glyoxalinylethylmethylcarbinol and its behaviour towards polyneuritis of pigeons, A., 214.

Sahashi, Y., Noguchi, T., and Hashimoto, N., has alcoholic extract of polished rice any noxious effect on pigeons? A., 215.

Sahlberg, U. See Qvist, W

Sahyun, M., and Alsberg, C. L., effect of skeletal muscle on blood-sugar in vitro, A., 1107.

Sahyun, M. See also Bischoff, F., and Blatherwick, N. R.

Saidenberg, A. See Tinker, M. Saidman, J., [automatic] device for testing the sensitiveness of human skin, substances, and fabrics to irradiation, (P.), B.,

Saint, S. J., pan-boiling control [of cane syrups], B., 655.

St. John, C. E., elements in the sun, A., 1419.

St. John, C. E., and Moore, C. E., presence of the rare-earth elements in the sun, A., 169.

St. John, E. L. See Gilman, H.

St. John, J. L., effect of variation of potassium and chlorine in a wheat ration, A., 95.

lowest temperatures at which oxides show reduction by hydrogen, A., 1237.

St. John, J. L., and Bailey, C. H., effect of dry skim milk on the fermentation and hydrogen-ion concentration of doughs, B., 262.

effect of dry skim milk on the water absorption of doughs and the plasticity of floor suspensions, B., 760.

St. John, N. B. See Gilman, H.

Saint-Maxen, A. Seo Dubrisay, R.

Saisho, I., preparation of therapeutic substances from tubercle bacilli, (P.), B., 997.

Saito, Shidzuka, presence of adrenaline in the suprarenals in the human and bovine fœtus, A., 1201.

Saito, Shidzuka, Kamei, B., and Tachi, H., simultaneous determination of the adrenaline liberation, sugar content, and coagulation time of the blood in non-fasted, non-anæsthetised dogs after hæmorrhage, A., 357.

Saito, Shidzuka. See also Tachi, H.

Saito, Shōichiro, separation of ruthenium and osmium, and the use of benzene in the iodometric titration of osmium, A., 671.

Sajitz, R., Pospiech, F., and Chemische Fabrik Pott & Co., spinning of artificial [silk] filaments, (P.), B., 14\*. Sak, S., production of yeast, (P.), B., 450. Sakai, S. See Fuwa, K.

Sakami, S., biochemical studies of pityrol. III. Neutral constituents of pityrol, B., 157.

Saklatwalla, B. D., and Vanadium Corporation of America, vanadium alloy, (P.), B., 604. vanadium-aluminium-silicon alloy, (P.), B., 945.

alloy of aluminium, silicon, and iron, (P.), B., 1019.

Saklatwalla, B. D. See also Vanadium Corporation of America. Saks, V. See Filtrators, Ltd.

Sakurada, I., allylcellulose, A., 299, 430, 799.

celluloseglycollic acid, A., 430, 799\*.

celluloseamine and celluloseaniline, A., 684.

role of dielectric constants, polarisation, and dipole moment in colloid systems. V., VI., and VII. Swelling of cellulose acetate in binary mixtures. I., II., and III., A., 1143, 1234, 1380.

acetylation of cellulose, B., 125.

hydrolysis of acetylcellulose during the hydration ageing, B., 319.

rôle of dielectric constants, polarisation, and dipole moment in colloid systems. IV. Swelling of cellulose acetate in single organic liquids, B., 713.

Sakurada, I. See also Kita, G., and Nakashima, T.

Sakurada, K. See Kita, G.

Sala, C.J. See Du Pont de Nemours & Co., E.I.

Salanitro, P. $\overset{\sim}{}$ See Minunni, G.

Salanský, H. See Cupr, V. Salant, E. O., effect of volume changes on the infra-red vibrations of simple crystals, A., 974.

Salat, C. See Witkowitzer Bergbau- & Eisenhütten-Gewerkschaft. Saldan, P., transformation of the  $\beta$ -phase in zinc-copper alloys; causes of the disagreement in the results of different investigators, A., 510.

properties of eutectic and eutectoid alloys in binary metallic systems, A., 1374; B., 328.

Saleck, W., vitamin-C content of fresh and frozen winter cow's milk, A., 727.
Salerni, E. M. See Salerni, P. M.

Salerni, P. M., treatment of gases or vapours for the recovery or extraction of hydrocarbons therefrom, (P.), B., 9.

Salerni, P. M., Salerni, E. M., and E.M.S. Industrial Processes, Ltd., distillation apparatus [for carbonaceous material], (P.), B., Salerno, U., Hall effect in steel-nickel alloys, A., 247. Salessky, N. A., initial conductivity of gypsum and rock salt, A., Saletore, S. R. A. See Guha, P. C. Salgado, J. Sce Fester, G. Salge, W. See Tammann, G. Salisbury, H. M. See Davis, C. E.Salisbury, R. See Fish, G. L. Salkind, J., and Kruglov, A., action of hydrogen iodide on tetraphenylbutinenediol, A., 55. action of the halogen acids on acetylenic glycols. V. Action of hydrogen iodide on tetraphenylbutinenediol, A., 1176. Salkind, J., and Sabojev, S., action of hydrogen bromide and bromine on a glycol of the ethylenic series, A., 1267. Salkind, J., and Teterin, V., geometrical isomerides of tetraphenylbutenediol, A., 1067. Salkind, S. See Gurwitsch, L. Salle, A.J., micro-determination of  $p_{\rm H}$  of blood and other biological fluids, A., 1327. differentiation of the coli and aerogenes groups of bacteria, B., Salley, D.J. See Gauger, A.W. Sallmann, G.A., making textiles having the appearance of leather, (P.), B., 849\* Salmang, H., and Schick, F., slagging of refractory materials. II. Influence of the chemical composition of the slags, B., 283. Salmang, H. See also Becker, Alfred. Salmoinghi, E. See Padovani, C. Salmoinghi, E. See Goodwin, W. Salmon, E. S. See Goodwin, W. Salmon, S. C. See Sellschop, J. P. F. Salmon, W. D., Guerrant, N. B., and Hays, I. M., effect of p<sub>H</sub> on adsorption of active factors of vitamin-B by fuller's earth, A., 104. Salmon, W. D. See also Guerrant, N. R. Salmon-Legagnenr, F. See Ramart, (Mme.) P.Salmony, Λ., γ-rays of potassium, A., 419.
Salmon, H. See Karrer, P.
Salter, R. M., and Ames, J. W., plant composition as a guide to the availability of soil nutrients, B., 106. Salvaire, P. See Cabannes, J.
Salvia, R., X-ray analysis of cathode-deposited platinum in presence of helium, A., 870. Salzberger, A. See Friedrich, A. Samec, M., micellar state of starch, A., 260. plant colloids. XXII. Potato amylopectin prepared by different methods, A., 612. sulphurylation of starch, A., 1427. plant colloids. XXIII. Soluble starches obtained by oxidation methods, B., 185. Samec, M., and Tomazo, N., solubility of starch in water below the swelling temperature, A., 1281. Samejima, M., and Katai, K., determination of nicotine in tobacco, B., 796. Sameshima, J., sorption of gases by minerals. I. Heulandite and chabazite, A., 757.
sorption of gas by porous matter, A., 874.
Sammartino, R. See Christeller, E. Sample, L., means for joining together parts of fused quartz, silica, etc., (P.), B., 816. Samsoen, M. See Guillet, L. Samsoen, M. O., vitreous state, B., 598. Samson, E. W. See Turner, L. A. Samson, K., determination of phosphorus in small amounts of serum and cerebrospinal fluid, A., 838. micro-determination of protein, A., 962. determination of fibrinogen by centrifuging, A., 1325. Samuel, R., molecular refraction and non-polar linking, A., 212. non-polar combination and atomic refraction. II., A., 628. Samuel, R. See also Lessheim, H. Samwel, P. J. P. See Büchner, E. H., and Katz, J. R. Sanborn, N. H. See Kohman, E. F. Sanchez, B. See Saem, J. Sand, H. J. S., steam drying oven with detachable base, A., 288. apparatus for electrolytic analysis, A., 672. Sand, H. J. S., and Brown & Son (Alembic Works), Ltd., laboratory apparatus for heating for evaporating liquids, (P.), B., 702.

Sand & Shingle, Ltd. See Hadfield, G. H.

Sandell, E. See Kolthoff, I. M. Sandeman, I., Fulcher bands of hydrogen, A., 375, 617. Sander,  $A_{\cdot \cdot}$ , production of illuminating gas from lignite,  $B_{\cdot \cdot}$ , 41. brown coals and bituminous coals of Hessen, and their utilisation, B., 270 Sander, W, and Goldschmidt Akt.-Ges., T., aluminium alloys, (P.), B., 858\* Sander, W. See also Müller, K. Sandera, K., chemical composition and physical properties of beet molasses, B., 33. sugar factory filter cloths. I.-IV., B., 572, 790. application of the [Sandera] conductivity apparatus to beetfactory control, B., 695 denaturing of raw sugar, B., 790. Sandera, K., and Zimmermann, B., polarographic measurements for detecting sugar decomposition, B., 695. Sandera, K. See also Stanek, V. Sanders, H. See "Kolloidchemie" Studienges. m.b.H. Sanders, K. B. See MacIntyre, W. II.Sanders, W. H., and Albers, V. M., spectrum of beryllium, A., 1205. Sanderson, E., and Yoe, J. H., proposed gold chloride titration for determining the toxicity of diphtheria toxin, A., 1494. Sanderson, R. W. W. See Gen. Electric Co., Ltd. Sandin, R. See Collip, J. P.Sandin, R. B., mercuration of resorcinol and alkylresorcinols, A. Sandin, R. B., and Sutherland, J. W., diethyl- and dihexylfluoresceins; dibromo- and monomercuri-derivatives, A., 934. Sandqvist, H., and Hök, W., rate of absorption of cocaine hydrochloride when injected subcutaneously into rabbits, A., 956. Sandqvist, H., and Lindström, T. H., sodium phenylethylbar biturate, B., 35. Sandstedt, R. M. See Blish, M. J. Sandved, K., quaternary system lead acetate-lead chloride-acetic acid-water at 25°, A., 400. Sandvik, O., dependence of the resolving power of photographic materials on the centrast in the test object, B., 960. Sandvik, O., and Silberstein, G., relationship between the resolving power of a photographic material and the wave-length of the light, B., 1033. Sandwell, P. See Bell-Irving, R. Sanford, G. R. See Torrey, B., jun. Sanford, S. A., softening of water, (P.), B., 418. Sanford Riley Stoker Co. See Riley, R. S. Sanfourche, A., oxidisability of silicon and of Moissan and Siemens' allotropic modification, A., 1030. oxidisability of silicon as a function of its state of division, A., 1251. Sanigar, E. B., comparison between sodium cyanide and potassium cyanide silver-plating solutions, B., 944. Sanigar, E. B. See also Glasstone, S. Sanmann, F. P. See Overman, O. R. Sanna, G., indole halogeno-ketones. I., A., 825. camphorphorone. I. Action of hydroxylamine, A., 931. Sanna, G. See also Puxeddu, E. Sano, R. See Shôji, T. Sano, T. See Okazawa, T Sansom, T. K. See Donghty, L. R. Santen, B. J. van, application of clarification after instead of before evaporation, B., 33.

Santenoise, D. See Fuchs, (Mme.) G. Santos, J. K., histology and microchemistry of the bark and leaf of Artabotrys suaveolens, Blume, A., 857 Sanyal, P. B., effect of manurial constituents on the quality of sugar-cane juice and gur, B., 32. adulteration of butter and ghee with animal fat and vegetable ghee, and its detection, B., 794. Saposchnikov, L. M. See Roginski, S. Z. Sappenfield, J. W., absorption spectra of certain organic liquids in the near infra-red, A., 236. Saraiva, M., fat of the seed of the murumurú (Astrocaryum murumurú), B., 986. Sargent, B. W., ranges of  $\beta$ -rays, A., 370.

Sargin, K., assay of insulin, A., 1342.
Sargint, A. M., and Metallon Development Co., Ltd., non-splinter-

able glass, (P.), B., 816.

Sandborn, L. T., [preparation of] l-menthone, A., 1076.

constant conditions. I. and H., A., 960.

Sande Bakhuyzen, W. H. van de. See Bouwers, A.

Sande Bakhuyzen, H. L. van de, [moisture in] wheat grown under

Sargint, A. M. See also Browne, E. H. S. and Metallon Development Co., Ltd.

Sarjant, R. J., heat-resisting steels with special reference to their application in the glass industry, B., 818.

Sark, A., and Korolev, I., multi-colour printing process, B., 1012. Sarkar, J. N., prevention of sugar losses during milling using chlorine, B., 655. Sarti, U. See Cecchetti, B.

Sartoris, G. B., low-temperature injury to stored sugar cane, B., 449. Sartorius, O., soil reaction and vines with regard to various limesensitive varieties, B., 831.

Sasaki, J., helium content of some Japanese minerals. II., A., 904.

Sasaki, K. Sec Iwasaki, C. Saschek, W. See Nicderl, J. B.

Saslavsky, J. J., Standel, E. G., and Tovarov, V. V., change of volume on neutralisation, A., 759.

Sass, J. E., modification of Mayer's "hæmalum," A., 1348. Sastri, B. N. See Sreenivasaya, M.

Sátek, J. Sce Bureš, E. Sato, H. Sce Watanabe, M.

Sato, Masabumi. See Fuwa, K.

Sato, Masakaszu, caseinogen-splitting action of papain, A., 1198. Sato, Masakaszu. See also Linderström-Lang, K.

Sato, N., creatine and creatinine. I., A., 956. Sato, N. See also Nagayama, T. Sato, S. Sco Shinoda, J.

Sato, T., critical points of pure carbon steels, B., 98.

Satoh, S., influence of nitrogen on special steels and experiments on case-hardening with nitrogen, B., 600.

Sauer, E., colloidal calcium scaps, B., 481.

production of printing surfaces [on celluloid, etc., from gelatin reliefs], (P.), B., 1033

Saner, E., and Dellenius, H., determination of water content of glue and gelatin, B., 567.

Sauerbier, J. C. M. See Nellensteyn, F. J.

Sauerwald, F. [with Fischnich, A., and Nenendorff, G.], effect of temperature on the drop hardness of nickel, B., 57.

Sanerwald, F. [with Hunczek, J.], preparation of synthetic bodies from metal powders, B., 212.

Sauerwald, F., and Pohle, K. A., fracture of iron at low temperatures, A., 1370.

Sauerwald, F., and Radecker, W., determination of internal friction of metals, especially mercury, A., 756.

Sauerwald, F. See also Krause, W.

Saunders, J., furnace for malt or other drying kilns or for open firegrates or basket fires, (P.), B., 77.

Sauvageot, J., charging hoppers for gas producers and other furnaces, (P.), B., 349.
Savaage, F. See Wartenburg, H. von.

Savage, E. M., apparatus for use in separating, sorting, and/or grading materials, (P.), B., 543.

Savage, J. Sec Imperial Chem. Industries, Ltd.

Savage, J. C., production of coloured smoke clouds, (P.), B., 769. Savage, P. M. See Internat. Nickel Co.

Savard, J., ultra-violet absorption curves of isoeugenol and eugenol, A., 11.

ultra-violet absorption spectra of o-, m-, and p-cresol, A., 488. ultra-violet absorption curves of terpene alcohols, A., 978.

comparative spectrum analysis of o-, m-, and p-isomerides of certain benzene derivatives, A., 978.

Savelsberg, J., and Schlesinger & Trier Kommanditges. auf Akt., C., production of metals [platinum from ores], (P.), B., 858. Savlnov, B. G., velocity of crystallisation of sucrose from its pure

solutions, B., 952. Savinov, B. G. See also Kukharenko, I. A. Savostjanov, G. See Kultjugin, A.

Savron, E. See Palladin, A.

Savy, P., and Thiers, H., urea and chlorine in the cerebrospinal fluid in retention of both substances, A., 840.

Sawai, I., and Ueda, Y., shrinkage of glass threads during heating, A., 756.

Sawyer, C. B., piezo-electric crystals, (P.), B., 688.

Sawyer, E. W. See Taylor, (Miss) M. Sawyer, R. A., and Lang, R. J., spectrum of gallium II and the (4s4p2) configuration in gallium I and indium I, A., 1206.

Sawyer, R. A. See also Mack, J. E.

Sayce, L. A., reaction between ferric oxide and hydrogen sulphide at temperatures between 120° and 830°, A., 1253.

Sayoe, L. A., and Briscoe, H. V. A., effect of a gas on the pressure of a vapour, A., 992.

Sayer, R. E., and Metals Recovery Co., concentration of ores by froth flotation, (P.), B., 439.

Saylor, C. H., adsorption and crystal form, A., 381.

Sayre, J. D., development of chlorophyll in seedlings in different ranges of wave-lengths of light, A., 523.

Saywell, L. G. See Hoyt, C. F.

Scafile, F. See Grassi-Cristaldi, G. Scagliarini, G., and Pratesi, P., reaction between sodium nitroprusside and sulphides, A., 160.

rapid determination of iron and uranium, A., 532.

Scale Solvent and Products Co. See Coughlin, J. M.

Scanavy-Grigorieva, M., great mobility of hydrogen and hydroxyl ions in aqueous solutions, A., 1015.

Scarborough, H. A., substitution products of 4-nitro- and 4-acetamido-diphenyl ether, A., 1439.

Scarborough, H. A. See also Burns, J

Scarpa, O., new type of [voltaic] pile, B., 823.

Scarritt, E. W., zeolito-deconcentrator combination for boilerwater purification, B., 962. Scatola, P. L. See Covello, M.

Schaad, R. E., and Boord, C. E., effects of knock-suppressing and knock-inducing substances on the ignition and partial combustion of certain fuels, B., 930.

Schaad, R. E. See also Egloff, G. Schaaf, F., formation of acetaldehyde from alanine in presence of pyrocatechol, A., 680.

sulphur content of melanotic pigments, A., 1098.

Schaafsma, A., and Dieke, G. H., ultra-violet bands of the hydrogen molecule, A., 963.

Schacherl, F., refraction of helium and argon and its dependence on pressures lower than atmospheric, A., 121.

refractivities of carbon monoxide, nitrogen, and nitrous oxide, and their dependence on pressures lower than atmospheric, A., 121.

Schachkeldian, A. B., colorimetric determination of dextrose, A., 298.

Schachner, A. See Kailan, A.

Schachnovitsch, I. G. See Budnikov, P. P.

Schack, A., temperature measurements in Siemens-Martin furnaces, B., 817.

Schad, F. M., extraction of mercury from cinnabar ore, (P.), B., 857.

Schad, K. See I. G. Farbenind. A.-G.

Schade, H., and Marchionini, A., physical chemistry of tho epidermis, A., 90. Schadendorff, E. See Lieb, H.

Schaefer, C., frequencies characteristic of the carbonate group, A.,

Raman effect in alkali halides, A., 741.

Schaefer, C., Matossi, F., and Aderhold, H., Raman effect in crystals, A., 1216.

Schäfer, J., separating and purifying apparatus for liquids, (P.), B., 501\*.

Schäfer, J., and Geigy Société Anonyme, J. R., manufacture of mineral acid-free synthetic tanning material, (P.), B., 406\*. Schaefer, K. See Gfeller, H. Schäfer, O. See Ziegler, K. Schaefer, W. See Helferich,

See Helferich, B., and Mayer, Fritz.

Schaeffer, G. See Kahn, M.

Schaeffer, Y., enzyme processes; action of amylase, A., 602.
Schafer, E. R., and Bray, M. W., pulping of flax straw. VI.
Properties of flax-straw cellulose and its value in the cellulose industries, B., 388.

Schafer, E. R., and Peterson, C. E., pulping of flax straw. V. Production of pulp by the chlorine process, B., 49.

Schaffer, J. M. See Tilley, F. W.Schaffer, N.K.See Kassel, L. S.

Schaffer, R.J.See McIntyre, W. A. See Bowen, N. L.

Schairer, J. F.

Schall, C., and Thieme-Wiedtmarckter, C., anodic formation of the triacetates of nickel and cobalt and Kolbe's reaction, A., 892.

Schames, L., extension of the Clausius-Maxwell criterion, A., 1013. Schaphorst, W. F. See Burditt, A. K.

Schapiro, M. See Burkser, E.

Schapiro, N., detection of rosin in soaps, B., 441.

Schapiro, N. [with Brachmann], action of hydrazine hydrochloride on aromatic ketones, A., 1302

Schapiro, S. Sco Isgarischev, N.

Scharavski, P. See Nasledov, D.

Scharf, R. See Lundin, H.

Scharff, G. E., and Imperial Chemical Industries, Ltd., prevention of rancidity in vegetable oils when forming part of plastic compositions for coating fabric, paper, etc., (P.), B., 443.

Scharff, G. E., and Nobel's Explosives Co., Ltd., prevention of rancidity in vegetable oils used in plastic compositions for coating fabric, paper, etc., (P.), B., 565. Scharles, F. H. See West, E. S. Scharnow, B. See Kussmann, A.

Scharrer, K., catalytic properties of soils, B., 182.

Scharrer, K., and Schropp, W., iodine as a biogenic element. XII. Feeding experiment with increasing doses of iodine on milch-cows, A., 1485.

Scharrer, K., and Schwaibold, J., iodine as a biogenic element. XVIII. Method of combination of iodine in milk, A., 715. absorption and adsorption of iodine by soils, and its elutriation, A., 1141.

iodine as a biogenio element. XIII. Chemistry of animal

iodine metabolism, A., 1485. Scharvin, V. V., and Galperin, D. I., derivatives of quinone-

acridone, A., 329.
Scharvin, V. V., and Soborovski, L. Z., halogenated 3:9-dibenzoyl derivatives of perylene; synthesis of isoviolanthrone, A., 1181. Schatalowa-Zaleskaja, E. See Zalewski, W.

Schaum, K., photometric and spectrophotometric studies. VI. Reflexion spectroscopy, A., 277.

Schaum, K., Hock, Lothar, and Dannefelser, W., photometric and spectrophotometrio studies. VIII. Measurements with the König-Marten spectrophotometer, A., 1404.

Schaum, K., and Walter, E., interferometric experiments on liquids in an electric field, A., 1366.
Schaum, K. See also Auwers, K. von.

Schaumann, O., mechanism of the action of cphedrine and the difference between the activities of its isomerides, A., 97.

Schaus, G., stirring apparatus for vacuum distillation vessels, (P.), B., 192.

Schay, G. See Pólányi, M.

Schazillo, B. A., and Konstantinovskaya, D. C., hunger and the potassium and calcium ion content of blood-scrum, A., 95.

Schazillo, B., and Ksendsowsky, M., effect of insulin on regeneration; biological rôle of potassium and calcium, A., 1110.

Schechter, M., hexosediphosphatase in hens with leg weakness, A., 842

Schedler, C. W. Seo Hirschkind, W.

Scheel, F. See Felix, K. Scheele, C. von, and Svensson, G., determination of starch in cereals and mill products, B., 492.

Scheer, J. van der. See Landsteiner, K.

Schefer, D. S., micro-determination of chlorides in blood and cerebrospinal fluid, A., 950.

Scheffer,  $\vec{F}$ , determination of the phosphoric acid requirement of soil, B., 788.

field trials and Neubauer experiments [for determining fertiliser requirements of soils], B., 991.

Scheffer, F. See also Dirks, B.

Scheffer, J., and Böhm, F., reduction potential of thiosulphate, A., 1147.

decomposition of thiosulphuric acid, A., 1253.

Scheibe, G., calculation of the product of the halogen ions by means of their ultra-violet absorption in aqueous solution,

absorption of the halogen ions in aqueous solution in the near Schumann ultra-violet (electron affinity spectra), A., 1363. co-ordination of the potentials of halogen ions and their ultra-

violet absorption in aqueous solution, A., 1363.

applications and limits of emission spectrographic analysis, A., 1409.

Scheiber, J., gel formation in fatty oils, B., 136.

Scheiber, J., and Blumer Chemische Fabrik, L., preparation of dammar resin for use in cellulose ester lacquers, (P.), B., 651.

Scheibler, H., and Baumann, E., compounds of bivalent carbon. III. Acetals of dicarbonio oxide and their decomposition into carbonio oxide acetals, A., 1296.

Scheibler, H., Trostler, F., and Scholz, E., high-molecular condensation products of carbamide and formaldehyde, A., 178

Scheifele, B., theory unifying drying and heat-polymerisation of fatty oils, B., 784.
Scheil, E., transition of austenite into martensite in hardened

steel, A., 1229. theory of steel hardening, B., 97. Scheil, E., trans-crystallisation of aluminium, B., 721.

Scheiner, E., [cause of] the Millon reaction given by urine in mental disease, A., 465.

sources of error in the determination of tyrosine, phenol, and uric acid by phosphotungstie acid, A., 614.

Schellenberg, H., and Kuhn, G., chemical changes in wine due to moulds, B., 735.

Schellenberg, O., ultra-violet bands of alkaline-earth sulphide phosphors, A., 10.

Scheller, E., and Deutsche Gold- & Silber-Scheideanstalt vorm. Roessler, process for arsenating organic compounds, (P.), B., 377\*.

Scheller, E. F., manufacture of activated charcoal, (P.), B., 705. Schellong, F., and Kramer, H., causes of alimentary hyperglycæmia in carbohydrate feeding and deprivation, A., 597.

Schemjakin, F. M. Sec Dunin, M. S.
Schenck, F. Sce Stoermer, R.
Schenck, M., and Kirchhof, H., bile acids. XXII., XXIII., and XXIV., A., 187, 558, 1070.

Schenck, R., Dingmann, T., Kirscht, P. H., and Wesselkock, H., equilibria in the reduction, oxidation, and carburation of iron. VIII. System iron-oxygen, A., 1145.

Schenok, R., Fricke, R., and Brinkmann, G., metallic filaments, A., 245.

Schenck, R., and Jordan, K., equilibria in the system calcium-sulphur-oxygen. I., A., 399.

Schenck, R., and Klas, H., equilibria in the reduction, oxidation, and carburation of iron. VII. Cobalt in an atmosphere of methane and hydrogen; the solid solution range, B., 327. Schenck, R., and Raub, E., equilibria in the systems cobalt—

sulphur-oxygen and nickel-sulphur-oxygen, A., 399. Schenk, P. W. See Schwarz, R.

Schenkel, K. See Siemens & Halske A.-G.
Schenkel, P. See Bauer, K. H.
Schenker, N. S., adsorption on glass and determination of the adsorbing surface, A., 1001.

Schepilevskaja, N. E., action of vitamins and surface activity. I. Vitamin-free substances which have surface activity in avitaminosis in guinea-pigs, A., 476. action of vitamins and surface activity II. Antiscorbutic

action of plant juices and their surface activity, A., 960.

action of vitamins and surface activity. III. Parallelism between the changes of antiscorbutic action and the surface activity of cabbage juice, A., 1203.
Schepss, W. See Grasselli Dyestuff Corporation, and I. G.

Farbenind. A .- G. Scherbaum, B., grinding and pulverising mill, (P.), B., 4\*.

Scherer, R. See Brecht, K. G. Scheringa, K., corrosion of lead, B., 855.

Schering-Kahlbaum Akt.-Ges., manufacture of 3:5-di-iodo-2-[hydr]oxypyridine, (P.), B., 37.

manufacture of isothiocarbamide ethers, (P.), B., 163.

manufacture of higher alkylated guanidine derivatives, (P.), B., 163, 589.

manufacture of substituted guanidines, (P.), B., 236.

manufacture of alkylisopropylphenols and their hydrogenation products, (P.), B., 237.

manufacture of thymol, its isomerides and their hydrogenation products, (P.), B., 237.

manufacture of metal mercaptocarboxylic acid esters, (P.), B.,

manufacture of condensation products from crude cresol and aliphatic ketonos, (P.), B., 316.

manufacture of decomposition compounds from condensation products of m- and p-eresols with acetene, (P.), B., 316.

manufacture of the hormone of the sexual organs, (P.), B.,

process for arresting the glycolysis of living cells and its application to manufacture of technical or commercial products, (P.), B., 417.

manufacture of [nuclear] alkylated phenols, (P.), B., 636. manufacture of 3-methyl-6-isopropenylphenol [4-isopropenyl-

m-cresol], (P.), B., 636. manufacture of di(halogenoacylated)diphenyl ethers and of

highly active therapeutic substances therefrom, (P), B., 673. manufacture of a therapeutically active substance from the anterior lobes of the pituitary body, (P.), B., 698. manufacture of thymol, (P.), B., 699.

manufacture of 2-halogeno-derivatives of pyridine, (P.), B.,

Schering-Kahlbaum Akt.-Ges., manufacture of active extracts from sexual organs, (P.), B., 911.

manufacture of pure m- and p-crosols, (P.), B., 973.

manufacture of physiologically active substances [from internal secretive organs], (P.), B., 997.

manufacture of germ-gland hormones from vegetable organisms, (P.), B., 997.

Schering-Kahlbaum Akt.-Ges., and Jordan, H., manufacture of condensation product from m-cresol and acetone, (P.), B., 467. Schering-Kahlbaum Akt.-Ges., and Räth, C., manufacture of

hydroxypyridine compounds, (P.), B., 709. Schering-Kahlbaum Akt.-Ges. See also Dohrn, M., Schickh, O.

von, and Schoeller, W.

Scherlin, S. M., and Epstein, G. I.,  $\beta$ -substituted alkylarsinic acids and their derivatives. I. β-Substituted ethylarsinic acids, A.,

Scherlin, S. M., and Vasilevski, V. V., \beta-hydroxyethyl allyl and its derivatives, A., 293, 423\*.
Schermerhorn, L. G. See Nightingale, G. T.

Scherpenberg, A. L. van. See Gabriels, A. A.

Scherrer, P., and Palacios, J., crystal structure of praseodymium dioxide, A., 125.

Scherrer, P., and Stäger, A., scattering of X-rays in mercury

vapour, A., 1120.
Scherschnev, P. A. See Dumanski, A. V.
Schestakov, P. I., manufacture of petroleum sulphonic acids and

salts thereof, (P.), B., 425\*.
Schetelig, P. See Soc. of Chem. Ind. in Basle.

Schettle, J., action of ammonia and amines on diphenylbenzyl-

pyronone, A., 327. Scheuchzer, W. H. See Asher, L.

Scheuer, M. See Neuberg, C.

Scheuing, G, and Winterhalder, L, synthesis of lobelia alkaloids, A., 1086.

Scheunert, A., vitamin content of meadow and pasture grass, A.,

Scheunert, A., and Schieblich, M., vitamin-B content of wheaten bread baked with varying amounts of yeast, A., 221.

evaluation of vitamin-D preparations, A., 1111; B., 996. vitamin-B content of various yeasts and of the wheaten bread prepared with them, A., 1344.

comparison of the vitamin-B content of fresh yeast and of tho

dried yeast produced from it, A., 1496.

Scheunert, A., Schieblich, M., and Rodenkirchen, J., so-called refection. I. Vitamin-B testing, A., 1496.

Scheurer, Lauth & Cie., and Diserens, L., discharges [using resorcinol] on cellulose acctate silk, B., 751.

Scheyer. See Neumann.

Scheyer, H. See Grasselli Dyestuff Corporation, and I. G. Farbenind. A.-G.

Schicharevitsch, S. A. See Budnikov, P. P.

Schicht Akt.-Ges., G., production of [concentrated] non-alcoholic fruit juices, (P.), B., 1030. Schicht Akt.-Ges., G. Sco also Eisenstein, A.

Schichtel, K., and Pivovarsky, E., effect of phosphorus, silicon, and nickel on the solubility of carbon in liquid iron, B., 920.

Sco Stollé, Ř. Schick, E.

Schick, F. See Salmang, H. Schicke, W. See Wedekind, E.

Schickh, O. von, and Schering-Kahlbaum Akt.-Ges., manufacture of chemical compounds [di(halogenoacylated)diphenyl ethers], (P.), B., 748\*

Schidlof, A., degeneration of paramagnetism at high temperatures, A., 1224.

degeneration of electron rotation and magnetism at low temperatures, A., 1224.

Schidlof, A. See also Berthoud, A.

Schidrowitz, P., and Burke, D. J., paints, particularly for the

surface-covering of thin rubber sheet material, (P.), B., 255. manufacture of thin rubber sheet material [leather substitute], (P.), B., 829.

Schiebaly, F. See Adler, W.

Schieblich, M., formation of vitamin-B by B. vulgatus (Flügge) Migula, A., 726.

Schieblich, M. See also Scheunert, A.

Schiebold, E., fine structure of felspars, A., 749. Schiebold, E. See also Le Blanc, M.

Schieck, H. G. See Keil, A. W. Schiedewitz, H. See Paal, C. Schieferdecker, W. See Brintzinger, H.

Schieferwerke Ausdauer Akt.-Ges., production of a viscous condensation product, (P.), B., 294.

production of moulded articles suitable as electric insulating material, (P.), B., 362.

Schieferwerke Ausdauer Akt.-Ges. Sce also Güntzel, R.

Schiegries, E. See Paschke, M.

Schiemann, G., aromatic compounds of fluorine. III. Nitration of fluorotoluenes, A., 1051.

Schiemann, G., and Roselius, W., aromatic compounds of fluorine. IV. Fluorine derivatives of diphenyl, A., 1052.

Schiemann, G. See also Staudinger, H.

Schierz, E. R., and Ward, H. T., decomposition of formic acid by sulphuric acid. II., A., 149.

Schiff, E. Sce Wilder, F. L.

Schikorr, G., system iron-water, A., 266.

reactions between iron, its hydroxides, and water, A., 283. colloid theory of rusting, B., 780.

Schild, A., manufacture of plate glass, (P.), B., 852. Schild, E. See Windisch, W.

Schilf, E., and Wohinz, R., occurrence of caffeine in human milk after ingestion of coffee, A., 348.

Schiller, J. F., and Wescott, W. W., sterilisation of air, (P.), B., 494.

Schilling, A., Sachse, R., Liamin, D., and Callaert, T., apparatus for production of oil gas, (P.), B., 547.

production of water-gas and extraction of oil from oil shale, (P.), B., 668.

apparatus for extracting liquid hydrocarbons from oil shale, (P.), B., 803.

Schilling, E., blood-catalase, A., 1095. Schilling, G. S., chemical nature of the constituent of fowl-serum responsible for non-specific precipitations, A., 1478.

Schilling, K. See Tillmans, J.

Schilov, E., pneumatic regulator for manipulation of burettes without taps, A., 287.

pneumatic apparatus for volumetric microanalysis, A., 898. Schilov, N., Dubinin, M., and Toporov, S., mixed adsorbents, A., 1376.

Schilov, N., and Tschmutov, K., adsorption phenomena in solutions. XVIII. Gas-free carbon as adsorbent, A., 1140.

Schimmel, F., solubilities and transition points of the ferrous chloride hydrates in aqueous solution, A., 31. ferrous bromide ennea- and di-hydrate, A., 664.

comparative measurement of the plastic stato of coals, B., 762. Schimmel, S., Dye, M., and Robinson, C. S., alteration of the basal

metabolism on imbibing chicory and chicory-coffee beverages, A., 1336.

Schimmel & Co., turpentine oil from larch turpentine, B., 404. elemi oil, B., 404.

detection of small quantities of alcohol in cassia oil, B., 453. pine-stump oil, B., 453.

dill top oil, B., 453.

cistus leaf oil, B., 453.

botha-grass oil, B., 453.

[oil of] carline thistle, B., 453.

oil of Eucalyptus dives, B., 453. oil of Dacrydium Franklinii, Hook, B., 453.

oil of Cryptomeria japonica, B., 453.

determination of citronellal in Java citronella oil, B., 493. adulterations of essential oils, perfumes, and drugs, B., 622.

Schimmer, L. See Dziewoński, K.

Schindelmeiser, J., and Beavis, J. A. F., production of nitro-, amino-, and hydroxylamino-derivatives of cymene, (P.), B.,

Schindler, J., and Hulač, V., lactic acid in the examination of wines, and Möslinger's method for its determination, B., 337. Schindler, W., "liquid-phase" rule in emulsions with sulphonated

oils, B., 727.

Schindler, W., and Flaschner, E., structure viscosity of aqueous "solutions" of sulphonated oils, A., 1142.

Schindler, W., and Klanfer, K., distribution of chromium in one-

bath chrome-tanned leathers, B., 614.

precipitation figures of basic chrome alum [tanning] liquors, B., 864.

Schinle, R. See Brigl, P. Schinz, H. See Ruzicka, L.

Schipulina, O. P. See Shukov, I. I.

Schirmacher, K., Renn, K., and General Aniline Works, Inc., preparation of a diazo-compound from an amine of the aromatic series, (P.), B., 889\*.

Schirmacher, K., Stein, B., Stenger, K., and General Aniline Works, Inc., bisaminoarylanthrone and anthrone derivatives, (P.), B.,

Schirmacher, K., Zütphen, L. van, and General Aniline Works, Inc., manufacture of anthraquinone nitriles, (P.), B., 889\*.

Schirmacher, K. See also Grasselli Dyestuff Corporation, and I. G. Farbenind. A.-G.

Schirp, A., rotatable air or gas filter of the plate type, (P.), B., 460, 500.

Schischokin, V. P., heat of fusion of s-phenylallylthiocarbamide, A., 127.

phenylallylthiocarbamide as a solvent, A., 131, 1172.

concentrated solutions, A., 995. Schittenhelm, A., and Eisler, B., action of thyroxine on the protein, water, and mineral metabolism, A., 221.

Schlacht, K., preservation of soil profiles, B., 756. Schläpfer, H. A. Sce Bornand, E.

Schlag, H. See Mrozek, O., and Teichert, K.

Schlager, E. See Battegay, M. Schlags, R. See Hirsch, Paul.

Schlatter, A., influence of "Saftbraun" dyeing on the strength of paper, B., 676.

Schlatter, E. R., and Dip-It, Inc., dyes [for domestic use], (P.), B., 772.

Schlatter, H. See Waldschmidt-Leitz, E. Schlayer, K. See Kuster, W.

Schleck, E., improvement of corn, (P.), B., 698.

Schleede, A., Jung, G., and Hettieh, A., explanation of the orientation polarisation found in Ca, derivatives, A., 980.

Schleede, A., and Tsao, T., cause of the phosphorescence of calcium

tungstate, A., 626. Schlegel, K. See Andrews, E. Sohleicher, S., economics of various refining agents in the Siemens-Martin process, B., 397.

Schleicher, S., and Göbel, E., Cottrell-Möller plant for the separation of dust from the flue gases of the Siemens-Martin furnace,

Schlemmer, F. See Dietzel, R.

Schlenk, W., and Bergmann, E., stereochemistry of aromatic ring systems. II., A., 688.
Schlenk, W., and Schlenk, W., jun., constitution of Grignard's

magnesium compounds, A., 687.

Schlenk, W., jun. See Schlenk, W. Schlesinger, A. See Pollak, J.

Schlesinger, H. I., and Valkenburgh, H. B. van, ferrous nitroso-

compounds, A., 977.
Schlesinger, K., method for determining the temperature of glowing filaments, A., 1210.

Schlesinger, M., simple apparatus for the determination of the alkali reserve of the blood, A., 1327.

Schlesinger, N., and Kubasowa, W., salting-out of ethyl acetate, A., 874.

Schlesinger & Trier Kommanditges. auf Akt., C. See Savelsberg,

Schlichenmaier, H. See I. G. Farbenind. A.-G.

Schlichting, O. See Grasselli Dyestuff Corporation.
Schliemann, M. See I. G. Farbenind. A.-G.
Schliephake, O. See I. G. Farbenind. A.-G., and Wilke-Dörfurt,

Schlieszmann, C. See Hieber, W. Schlingman, P. F. See Chamberlin, D. S.

Schlittler, E. See Fierz, H. E. Schlivitch, S. See Grumbach, A.

Schlomka, G. See Bürger, M.

Schloss, J. See Lange, H.

Schlossmann, H., and Mügge, H., adrenaline content of blood during narcosis, A., 1335.

Schlossmann, H. See also Anselmino, K. J.

Schlubach, H. H., and Elsner, H., synthesis of the fundamental substance of inulin, A., 51. nature of inulin, A., 915.

Schlubach, II. II., aud Flörsheim, IV., constitution of sinistrin, A., 914.

Schlubach, H. H., and Prochownick, V., displacement of the equilibrium between normal and y-galactose in solution, A., 912. Schlubach, II. H., Treiz, F., and Rauchenberger, W., transform-

ations of  $\beta$ -pentabenzoyl-h-glucose, A., 50. Schlubach, H. H., and Wolf, I. [with Stadler, P.], crystalline

tetra-acetyl-a-glucose, A., 912. Schlundt, H. See Walter, Z. T.

Schmager, H. See Wolf, Ludwig

Schmalfuss, H., and Peschke, W., tyrosines methylated in the nucleus and the formation of melanin, A., 1447.

Schmalfuss, H. See also Jantzen, E.

Schmandt, W., detection of cacao embryo in cocoa products, B., 146.

Schmaus, G., liquid for accumulators, (P.), B., 824.

Schmeller, J., re-working of finely-divided metal particles, (P), B., 858.

Schmeller, M. See Bamann, E. Schmelzer, A., Muth, F., Gleitenberg, E., and General Aniline Works, Inc., [manufacture of insoluble] azo-dye, (P.), B., 846\*. Schmerel, F., decreased diastatic action of the urine in kidney diseases and in diabetes, A., 841.

Schmerwitz, G. See Daene, H.

Schmick, H., influence of molecular attraction forces on the viscosity and heat conductivity of gas mixtures, A., 24. determination of gas temperatures by measurement of pressure

differences, B., 963.

Schmick, H., and Seeliger, R., transport of matter in the iron arc, A., 228.

Schmick, H., and Siemens & Halske Akt.-Ges., determining the contents of a gas, (P.), B., So.

determining gaseous carbonic acid, (P.), B., 252.

Schmid, A., galvanic cell, (P.), B., 362. Schmid, A. See also Schmid-Patent Corporation.

Schmid, Arnold, and Meissner, J., nitration of glycerin, glycol, and similar alcohols, (P.), B., 74.

separation and after-separation of nitroglycerin, or nitroglycol, and similar explosives from the acids used in their preparation, (P.), B., 304, 341.

Schmid,  $\hat{E}$ , and Vaupel, O, strength and plasticity of rock-salt crystals, A., 989.

Schmid, E., and Wassermann, G., texture of drawn magnesium and zinc wire, A., 743. duralumin, B., 779.

Schmid, E. See also Boas, W., and Pólányi, M. Schmid, F. Seo Ambard, L., and Vanino, L.

Schmid, Franz, and Weise, K., determination of the opacity [of pigments] by painting methods, B., 1023.

Schmid, H., kinetics in streaming reaction systems, A., 515.

Schmid, H. See also Manchot, W. Schmid, L., and Zacherl, M. K., conductivity measurements in liquid ammonia, A., 1390.

Schmid, P. See Rüsberg, F. Schmid, R. See Pogány, B.

Schmid, Werner, influence of sympathetic innervation on the phosphate and creatinine contents of striated mammalian muscle, A., 94.

Sohmid, W. E., X-ray investigation of statistical anisotropy in crystal masses, A., 1130.

Schmidlin, R. See Grasselli Dyestuff Corporation.

Schmid-Patent Corporation, and Schmid, A., electric battery, (P.),

Schmidt, Albert, thermodynamic treatment of explosive reactions. I. and II., B., 303, 379.

Schmidt, Albert. See also Haid, A. Schmidt, Arvid. See Fischer, W. M.

Schmidt, A. A. See Entin, D. Schmidt, B., new resonance series of selenium, A., 4.

Schmidt, C. C. See Carman, A. P.

Schmidt, C. L. A., reaction between nitrous acid and certain amino-acids at 45°, A., 1048.

Schmidt, C. L. A., Appleman, W. K., and Kirk, P. L., effect of position of substitution on apparent dissociation constants of some amino-acids, A., 509.

Schmidt, C. L. A. See also Kirk, P. L., Rawlins, L. M. C., and Schmidt, Werner.

Schmidt, E., and Dyckerhoff, E., heat-insulating processes, devices, and materials, (P.), 81, 461. thermal insulation, (P.), B., 838.

Schmidt, Erich, [preparation of nitro- and chloronitro-olefines], A., 170.

Schmidt, Erich, Atterer, M., and Schnegg, H., absence of galactans from skeletal incrustation of cell-walls, A., 1113.

Schmidt, Erich, Atterer, M., and Thaler, H., removal of fermentation-restraining humic substances from the hydrolysis products of hemicelluloses, B., 937.

Schmidt, Erwin, determination of a-cellulose, B., 429.

Schmidt, Eugene. See Geiger, E.

Schmidt, E. A. W., detection of atomic disintegration of aluminium by means of the tube electrometer, A., 972.

Schmidt, E. A. W., and Stetter, G., investigation of natural H-rays with the tube electrometer, A., 1123.

Schmidt, E. G., amino-acid content of the blood in health and disease, A., 1330. Schmidt, E. W., and Riedel-E. De Haen Akt.-Ges., J. D., dis-

infection of seeds and composition therefor, (P.), B., 572.

Schmidt, F., production of artificial materials, and articles made therefrom, from the condensation products of urea or urea derivatives with formaldchydo or substances yielding formaldehyde, (P.), B., 64. plastic masses, B., 125.

Schmidt, F. L., production of fertiliser mixtures, (P.), B., 733. production of briquettes, (P.), B., 932.

Schmidt, G. See Zwikker,  $\hat{C}$ .

Schmidt, Gerhard, enzymic deamination in muscle, A., 346.

Schmidt, Gerhard. See also Embden, G.

Schmidt, G. C., and Keller, Mechtild, number of water and alcohol molecules associated with the silver ion, A., 768.

Schmidt, H., extraction of natural animal and vegetable material, (P.), B., 576.

Schmidt, H. (Kiel). Sco Runge, H.

Schmidt, Hans, and Winthrop Chemical Co., Inc., complex metallic compound of pyrocatechol, (P.), B., 1032\*.

Schmidt, Harry, ozonisation of nopinene and sabinene, A., 323. transformation of pinocarveol and sabinol, A., 323.

separation of alcohols and phenols from oil mixtures, B., 10. Schmidt, Hermann, measurement of gas temperatures up to 1500° in radiation fields of varying anisotropy, B., 115.

Schmidt, Hermann. See also I. G. Farbenind. A .- G.

Schmidt, Hildegard. See Schwab, G. M. Schmidt, H. H., and Pretschner, F., photochemistry of the silver halides. V. Silver value and fixing process, A., 894.

photochemistry of the silver halides. VI. Analytical and photographic investigation of the silver halides, A., 1152. photochemistry of the silver halides. VIII. Silver values and

tho process of fixation with sodium sulphite, A., 1405. photochemistry of the silver halides. IV. New method of determining excess silver in unexposed photographic films, and studies on the processes involved in exposure, B., 189.

Schmidt, H. J. See Müller, Robert.

Schmidt, J. H. See Bakelite Corporation. Schmidt, J. M., beryllium and its chloride, A., 1024.

Schmidt, K., and Schmidt Ges.m.b.H., K., rotary furnace for melting metals, (P.), B., 522.

Schmidt, Karl, production of illuminating gas from lignite, B., 41. Schmidt, Kurt. See Chem. Fabr. auf Aktien (vorm. E. Schering).

Schmidt, M. P. See Grasselli Dyestuff Corporation. Schmidt, O. See I. G. Farbenind. A.-G.

Schmidt, Oskar. See Spath, E.

Schmidt, P., simultaneous separation and thermic treatment of mixtures of fluids and granular or other substances, (P.), B.,

Schmidt, Richard, photochemical action of bromine on methyl maleate and fumarate, A., 154.

Schmidt, R. E., Stein, B., and Bamberger, C., question of isomerism in the case of 9-phenyl-9-benzylfluorene, A., 1054. [di- and tri-quinones of the anthracene series], A., 1075.

Schmidt, R. E. Sco also Grasselli Dyestuff Corporation. Schmidt, W. See Tschelincev, V. Schmidt, Walter (Erlangen). See Busch, M.

Schmidt, Walter (Leipzig), crystal structure and ferromagnetism,

apparatus for demonstration [by projection on a screen] of m. p. and f. p. determinations, A., 1033.

Sohmidt, Walter, and Baier, Ernst, kinetics of the change of optical properties [of crystals] with temperature, A., 981.

Schmidt, Walther, electrical resistance of some silver alloys, A., 24. Schmidt, Werner, Kirk, P. L., and Schmidt, C. L. A., dissociation constants of ornithine, A., 397.

Schmidt, Werner. See also Benda, L. Schmidt, Willi. See Meisenheimer, J.

Schmidt, Wolfgang, and Schmidt Serumwerk Akt.-Ges., W., cultivation of the micro-organisms parasitically vegetating in human and animal bodies and preparation of immunising sera therefrom, (P.), B., 339.

Schmidt, W. A., and International Precipitation Co., [Portland] cement manufacture [by the wet process], (P.), B., 20.

Schmidt Ges.m.b.H., K. See Schmidt, K.

Schmidt Serumwerk Akt.-Ges., W. See Schmidt, Wolfgang. Schmidt-Nickels, W., action of sulphur dioxide on the halogeno-

magnesyl derivatives of carbinols, A., 695. Schmidt-Ott, A., and Stauder, K. H., determination of fatsplitting [activity in duodenal juice], A., 1330. Schmied, M. E. See **John**, H.

Schmitt, C., extracting vitamin substances from cotton-seed, (P.), B., 868.

Schmitt, F. Seo Soc. anon. Assoc. Parisienne pour l'Ind. Chim. Schmitt, F. O., gas exchanges of nerves during and after anaëro-

biosis, A., 1484. Schmitt, F. O., Johnson, C. H., and Olson, A. R., oxidations promoted by ultrasonic radiation, A., 523.

Schmitt, F. O. See also Meyerhof, O.

Schmitt, G., and Westinghouse Electric & Manufacturing Co., tiltable furnace, (P.), B., 154.

Schmitt, J. J. See Sheppard, S. E. Schmittner, P. See Berl, E.

Schmitz, A. Seo Abderhalden, E.

Schmitz, B., meadow fertilisation experiments in Ticino, B., 831. Schmitz, E., and George, E., homogeneity of vitamin-B, A., 358. Schmitz, F., resistance of some steels to chemical action in relation to their nickel, chromium, and carbon content, B., 285. Schmitz, G. H. Sco Ritter, J. J.

Schmitz, Helmut. Sco Pfeiffer, P.

Schmitz, Henry, laboratory methods of testing the toxicity of wood preservatives, B., 475.

Schmitz, P. See Tschirch, A. Schmitz, W., measurements on the ionisation of air by means of electron streams, A., 114.

Schmitz, W. H., manufacture of asphalt emulsions, (P.), B., 507. manufacture of road surfaces, (P.), B., 520.

Schmitz-Dumont, O., subsidiary valency forces of pyrrole nitrogen, A., 328.

Schmitz-Dumont, O., and Motzkus, E., subsidiary valency forces of indole nitrogen, A., 452

Schmölzer, A. See Suida, H. Schmolka, H. See Kastner, R.

Schmorl, K., electrolytic conductivity of aqueous extracts of flour, B., 534.

Schmuck, A., acids of tobacco. I., B., 796. Schmuck, A., and Balalucha, V., chemical composition of tobacco, B., 737.

Schmücking, A., and Dlehl, K., clarification of liquids by means of centrifuges with filter drums, B., 799.

Schmutz, F. C., and Gamble, D. L., destructive light sources for use in accelerated weathering systems, B., 609. Schmutzler, E. See Bornstein, A.

Schnabel, F. See Margosches, B. M. Schnabel, P. See Vignati, J.

Schnabel, R., and Excelsior Feuerlöschgeräte Akt.-Ges., production of fire-extinguishing form, (P.), B., 40.

Schneck, A., alkali number of milk ash of various animals, B., 187. dispersoid-chemical methods for the examination of milk, B., 735.

Schneck, M. See Glaser, E. Schnegg, H. See Schmidt, Erich.

Schneider, A., exactitude of measurement of gas-investigation methods, B., 930. Schneider, A. See also Tafel, W.

Schneider, Adolf. See Hangleiter, C., and Zellstoff-Fabr. Waldhof. Schneider, E., and Widmann, E., carbohydrate exchange and degradation of the dextrose molecule, A., 1333.

carbohydrate exchange and degradation of the dextrose molecule. II. Lactic acid, A., 1483.

Schneider, F., determination of proteins in blood-serum, A., 1325. Schneider, Kurt. Soc Rheinboldt, H.

Schneider, O. See Breuning, E Schneider, R. Sco Hartmann, H.

Schneider, S., and Westinghouse Electric & Manufacturing Co., [electrical] molting furnace, (P.), B., 605.

Schneider, 17., piezoelectric method for determining crystal classification, A., 19.

crystal structure of anhydrous mesotartaric acid and tartrates, A., 1223.

Schneider, W. See also Reis, A.

Schneider, Walter. See Acklin, O.

Schneider, Wilhelm, and Leonhardt, H., thio-sugars and their XIV. a-Glucothiose [a-thioglucose], A., 913. derivatives.

Schneider, Wilhelm, and Weiss, K., pyridinearylimines. Elimination and wandering of arylnitrogen complexes, A., 195. Schneiderhöhn, H., microscopic and spectroscopic investigation of the platinum-bearing rocks of the Bushvold igneous complex (Transvaal), A., 905.

microscopio composition and structure of basic slag after different heat treatments and their relation to the citrio acid

solubility, B., 358.
Schneidewind, R., ohromium plating, B., 478.
Schneidewind, R. Sco also Willard, H. H.

Schnelder, O., positivo electrode for electrical accumulators, particularly for use in miners' lamps, (P.), B., 783.

Schnellbach, W., determination of the water content of strychnine sulphate, B., 869.

solubility of sodium salicylate in alcohol, A., 1229

Schnelle, F., baking quality of wheat varieties, B., 995. Schnepf, J., and Westinghouse Electric & Manufacturing Co., recuperative annealing furnace, (P.), B., 522.

Schniderschitsch, N. See Zinke, A. Schnittspahn, M. See Agde, G.

Schnitzspalm, K. See Grasselli Dyestuff Corporation, and I. G. Farbenind. A .- G.

Schnorf, P. See Briner, E. Schnoutka. See Travers, A. Schnürch, K. See Hernler, F

Schnurmann, R., size of gas bubbles in liquids, A., 1233.

pressure electrolysis of water, B., 945. Schnurmann, R. Sco also Bechhold, H.

Schnyder, H. Sco Baur, E.

Schocken, K., absorption coefficient of some gases for short-wave X-rays, A., 1355.

Schöbel, W. See Keller, Oskar. Schoeller, H. See Schrader, H.

Schoeller, W., Allardt, H. G., and Schering-Kahlbaum Akt.-Ges., metalmercapto-acid esters and their manufacture, (P.), B., 538\*. Schoeller, W. See also Chem. Fabr. auf Aktien (vorm. E. Schering). Schoeller, W. R., analytical chemistry of tantalum, niobium, and

their mineral associates. XV. Separation of tantalum and niobium from titanium and zirconium, A., 1160.

Schoeller, W. R., and Jahn, C., analytical chomistry of tantalum, niobium, and their mineral associates. XIV. Separation of small quantities of tantalum and niobium from titanium, A.,

Schöllkopf, K., and Rheinische Kampfer-Fabr. G.m.b.H., manufacture of i-menthol, (P.), B., 377\*.

Schön, K. See Bernhauer, K.

Schoen, M., rôle of phosphorus in fermentation, A., 1199.

Schoen, M., and Elion, E., formation of hexosephosphates; non-fermentable sugars, A., 100.

Schön, M. (Münschen), total reflexion of long wave-length X-rays, A., 1355

Schoen, M. J., and Rinse, J., examination of pigments in ultraviolet light, B., 609.

Schönberg, A., organic compounds of sulphur. XI. Comparison of the tendency of polymeric thicketones towards dissociation with that of the corresponding compounds of the ethane series, A., 316.

Schönberg, A., and Schütz, O. [with Arend, M., Ostwald, U., and Kaplan, F.], organic compounds of sulphur. XIV. Relationship between the dissociation tendency of thioacetals and compounds of the ethane series; investigation of hexaphenylethane, A., 1300.

Schönberg, A., Schütz, O., Bruckner, V., and Peter, J., organic compounds of sulphur. XV. Thermolabile thio-ethers, A., 1451.

Schönberg, A., Schütz, O., and Peter, J., organic compounds of sulphur. XII. Formation of mercaptols by the action of aliphatic diazo-compounds on disulphides, A., 447.

organic compounds of sulphur. XIII. Action of aliphatic diazo-compounds on sulphur aryl chlorides and mercaptans, A., 924.

Schoenebeck, O. von. See Grassmann, W.

Schoener, J. G. See Internat. Nickel Co. Schönfeld, J. F. P., and Bataafsche Petroleum Maatschappij, separating congealable solids from oils, (P.), B., 805\*. obtaining solid paraffin [from oils], (P.), B., 884.

Schoenfeld, M., winding and wet-treating of textile threads,

particularly artificial silk threads, (P.), B., 775. Schönheimer, R., red colouring matter of cardiac and skeletal muscle, A., 207.

significance of plant sterols for animal organisms, A., 212. a peculiar disturbance of carbohydrate metabolism, A., 840. Schönheimer, R., and Oshima, F., copper content of normal and pathological organs. I. Method. II. Copper content of normal and hamochromatose liver, gallstones, and whole blood. A., 341.

Schönhöfer, F. See I. G. Farbenind. A.-G., and Schulemann, W. Schoenthal, L., acid-base metabolism; effects of administration of salt and of restriction of water, A., 1195.

Schoep, A., renardite, A., 787.

Schoepfie, C. S., and Connell, L. H., effect of cathode rays on hydrocarbon oils and on paper; mechanism of cable deterioration, B., 586.

Schoffstall, C. W. See Coblentz, W. W.

Schofield, F. H., m. p. of palladium, A., 1372.

Schofield, R. K., and Keen, B. A., rigidity in weak clay suspen-

sions, B., 446.
Schol, C. H., removal of dust from air, gas, and other elastic

fluids, (P.), B., 544.
Scholefield, F., action of light in the dyeing and finishing of cotton and viscose silk material, B., 430.

Scholefield, F., and Patel, C. K., effect of light during the bleaching of some coloured cellulose materials by hypochlorites, B., 595. Scholes, G. E., [pressure-tight joint for bomb] calorimeters, (P.).

B., 802. Scholes, S. R., loss of silica during glass melting, B., 18. Scholl, P. See Bredt, J.

Scholl, R., Böttger, O., and Hass, S., differently coloured conditions of anthraquinolearboxylic acids and anthraquinol-a-carboxylactones, A., 567.

Scholl, R., and Donat, J. [with Semp, H., and Wanka, L.], nature

of anthraquinone-a-carboxylic esters, A., 818,

Scholl, R., Hass, S., and Meyer, H. K. [with Winkler, W., Seer, C., Dischendorfer, O., Brissimdji, S., and Messe, W.], anthraquinone. 1:5-dicarboxylic acid and certain simple and mixed anthraquinonecarboxylic anhydrides, A., 320.

Scholl, R., and Meyer, H. K., indoquinonanthrene (trans-bisang-

or 1:2:5:6-diphthalylanthraquinone), A., 190.

Scholl, R., and Renner, F. [with Böttger, O., Hass, S., and Meyer, H. K.], anthraquinol-a-carboxylolactones, A., 817.

Scholl, R., and Wanka, L. [with Hähle, H., and Leonhardt, W.]. anthraquinol-1:5-dicarboxydilactone, A., 930.

Scholler, H., saccharification of cellulosic materials, (P.), B., 186.

converting cellulose and the like into sugar, (P.), B., 907.
Scholtz, H., "gasol" from carbonisation gas, and use of the gas for cutting and welding, B., 271. Scholz, E. Sce Scheibler, H.

Scholz, H. See Wienhaus, H.

Schommer, W. Sco Dilthey, W. Schonbrunn, J., Keller, G., and Aktien-Gesellschaft Brown, Boveri & Co., heat treatment apparatus, (P.), B., 343. Schonland, B. F. J., new electroscope, A., 1121.

Schoorl, N., caffeino-salicylic acid; a molecular compound, A., 707. influence of position isomerism on specific properties, A., 1218. refraction of alcohol-water mixtures, A., 1374.

titration of sugars, B., 336, 952.

preserving chloroform, B., 995.

Schopp, N. See Friedmann, L. Schopper, W. See Kirmse, E.

Schorger, A. W., and Wood Conversion Co., production of mucie acid, (P.), B., 917.
Schorigin, P., condensation of benzhydrol with phenols and

cresols, A., 183.

Schorigin, P., and Marakov-Semljanski, J., p-tolyl triphenyl. methyl ether, A., 183. chormüller, A. See Fischer, H.

Schormüller, A.

Schormüller, J. See Oberhauser, F.

Schorn, H. See Verein. Aluminium Werke A.-G.

Schorstein, H., Jander, G., and Plundt, O., direct determination of chloride in milk by conductivity titration, B., 414.

Schory, V. S., smooth-surface tile, B., 246.

Schotte, H. See Chem. Fabr. auf Aktien (vorm. E. Schering). Schotz, S. P. See Toto Co., Ltd.

Schotzky, K. F. See Seemann, H.

Schou, S. A., structure and activation of the molecules of aliphatic aldehydes. I. Analysis of the spectrum of the vapour of formaldehyde, A., 236.

structure and activation of the molecules of aliphatic aldehydes. II. Formaldehyde, acctaldchyde, propaldehyde, and chloral, A., 489.

structure and activation of the molecules of aliphatic aldehydes. III. Absorption spectra of solutions, A., 625.

Schoutens, W. See Nieuwenburg, C. J. van. Schrader, A. See Gebhard, K. Schrader, A. L., and Auchter, E. C., comparative effect of various nitrogen fertilisers on bearing apple trees of low vigour, B., 731. Schrader, G. See Krauss, F. Schrader, H., and Schoeller, H., preparation of sulphur of a high degree of dispersion, (P.), B., 18\*. Schrader, J. E., simple air thermometer, A., 1416. Schrager, B., polarographic studies with the dropping mercury cathode. I. Amphotority of ferrous hydroxide, A., 770. Schramm, E., sandblast abrasion test for glazes, B., 519. Schramm, E., and Sherwood, R. F., some properties of glaze slips, B., 473. Schramm, E. See also Wiessmann, H. Schramm, W., action of oxalic acid and malonic acid on tetramminocobaltic complexes and analogous compounds, A., 780. Schrammen, (Frl.) A., structure of the  $1'S_0-2'P_1$  and other lines in the cadmium spectrum, A., 2. Schrauth, W., technical importance of adipic acids and their derivatives, B., 163. sipalin: a new softening reagent for cellulose lacquers, B., 565. Schreckental, G. See Seka, R. Schreiber, H., purifying raw sugar juices, (P.), B., 866. Schreinemakers, F. A. H., osmosis of ternary liquids. IX. General considerations, A., 258, 759. osmosis of ternary liquids. VII.-VIII., A., 392. isotonic liquids, A., 637. osmosis of liquids. II., A., 642. osmotic vapour-pressure. I. and II., A., 759, 877. osmosis in ternary liquids through a membrane permeable to two of the three substances, A., 1235. Schreiner, A., preparation of highly-active charcoal, (P.), B., 505. Schreiner, B. F. See Reinhard, M. C. Schreiner, E., Frivold, O. E., and Ender, F., f. p. measurements in very dilute solutions of strong electrolytes in cyclohexanol, A., 1386. Schreus, H., wash-bottle for the gas cell, A., 109. Schreyer, R., production of acids by Aspergillus fumaricus, A., 217. Schröder, A., works' control and laboratory equipment, B., 541. fine structure of brookite and the physical behaviour and changes of state of three natural forms of titanium dioxide, A., 748. Schröder, G., production of remedies from glandular organs, (P.), B., 150\*. Schröder, W., reciprocal salt pair MgSO<sub>4</sub>-2NaNO<sub>3</sub>-H<sub>2</sub>O. II., A., 267, 1238\* Schröder, W. G., cooling drums, (P.), B., 701. Schroedter, E., occurrence of free sulphuric acid in ground-water, A., 168. Schröer, E., critical state. II. Limiting curve of ethyl ether, A., 498. critical state. III. Behaviour of ethyl ether under isothermal compression in the critical and hypercritical region, A., 498. critical state. IV. Solutions in ethyl ether, A., 1228. Schroeter, G., guaiacum reaction of milk, B., 414. Schroeter, Georg, Müller, Hans (Berlin), and Huang, J. Y. S., hydrogenation of phenanthrene. II., A., 548. Schröter, K. See Gen. Electric Co., and Maurer, E. Schropp, W., iodine as a biogenic element. XXI. Feeding experiment with iodine on milch-cows, A., 1485. Schropp, W. See also Mauer, Ed., and Scharrer, K. Schroth, W., production of asphalt-like road building and the like material from coal tar or pitch, (P.), B., 1017. Schryver, S. B., proteins in brewing, B., 1048. Schteingart, M. See Castex, M. R. Schtschukin, A. A., zinc cements, B., 852. Schtschukina, M. N. See Tschitschibabin, A. E. Schub, E. See Bauer, K. H. Schubert, F., local strength test for fabrics, textiles, rubber, etc., B., 90.

Schubert, Friedrich. See Ehrlich, F. Schubert, F. W. See Brysilka, Ltd.

Schubert, M. See Grasselli Dyestuff Corporation.

Schuch, F., production of hydrofluoric acid, (P.), B., 16.

detoxication, A., 724.

of fused masses, A., 25.

Schuchardt, A., attrition mill, (P.), B., 913. Schuckmann, G. von. See Waldschmidt-Leitz, E. Schückher, A., apparatus for purifying and moistening air, (P.), Schuegraf, K., halogen derivatives of thyronine (deiodothyroxine), A., 697. Schüler, H., and Brück, H., hyperfine structure in doublets and its use for the determination of nuclear moments, A., 967. hyperfine structures in triplet spectra and their use for the determination of nuclear moments, A., 967. Schüler, W., calcium and magnesium metabolism in rickets, A., 1331. Schueller, E., dyeing [with oxidation colours], (P.), B., 894. Schuette, C. N., inductor coils for the high-frequency furnace, B., 782. Schütte, H. See I. G. Farbenind. A .- G. See Hahl, H. Schütz, L. Schütz, O. See Schönberg, A. Schütz, P. See Matthes, H. Schütz, W., the tan C.H/T law of paramagnetic rotation of the plane of polarisation, A., 742 Schuikin, N. I. See Zelinski, N. D.Schulek, E., and Stasiak, A., assay of mercury oxycyanide and mercury cyanide pastilles, B., 147. VI. and Schulek, E., and Vastagh, G., iodoform content of iodoform gauze, determination of 2-phenylquinoline-4-carboxylic acid in the presence of salicylic acid, acetylsalicylic acid, and hexamethylenetetramine, B., 869. Schulek, E., and Villecz, P., determination of arsenic in presence of organic substances, halogens, and heavy metals, A., 285. Schulemann, W., Schönhöfer, F., Mietzsch, F., and Winthrop Chemical Co., Inc., [manufacture of] 8-amino-6-alkoxyquinolines, (P.), B., 577\* Schulemann, W., Schönhöfer, F., Wingler, A., and Winthrop Chemical Co., Inc., manufacture of 6-alkoxy-8-amino-quinolines, (P.), B., 911\*. Schulemann, W. See also I. G. Farbenind. A.-G. Schulenberg, W. L., apparatus for heat-treating articles, (P.), B., Schuler, E. T. Sce Webster, H. A. Schuler, W. See Felix, K. Schulgin, V. M., experiments with the electrolytic generator, A., 618.Schulgina, O. See Kostytschev, S. Schulhof, K. See Hektoen, L. Schuloff, R., Pollak, R., and Riesz, E., [simplified method for the preparation of substituted μ-methylbenzthiazoles and their transformation into new, heterocyclic polymethine dyes], A., Schuloff, R., Pollak, R., and Riesz, E. [with Eisner, I., Hitschmann, G., and Hopmeier, M.], influence of the acylating component on chlorination of the basic residue of arylsulphonylarylides, A., 1056. Schulte, E. See I. G. Farbenind. A .- G. Schulte, F. See Herz, R. Schulte, L., and Allegheny Steel Co., [chromium-cobalt] electroplating process, (P.), B., 687. Schulteis. See Horch, R.
Schultz, E., sugar centrifuge, (P.), B., 833.
Schultz, F. W., and Ziegler, M. R., distribution of the globulin and albumin fractions in the blood and urine [of children] in nephrosis, A., 717.
Schultz, J. W., calculation of latent heats of vaporisation of hydrocarbons and alcohols, A., 991. Schultze, G., photochemical formation of carbonyl chloride. V. Reaction between intensively dried gases, A., 1404. Schultze, G. See also Wartenberg, H. von. Schultze, K., capillarity. X. Further formulation of capillary structures, A., 645.
capillarity. XI. Diffusion and concentration alterations in capillaries, A., 758. Schubert, J., tetanus toxin, ricin, and some alkaloids and their diffusion of methylene-blue in gelatin gels, A., 1383. Schultze & Co. Oelfabr., A. See Oel- & Fett-Chemie G.m.b.H. Schultzer, P., effect of prolonged ultra-violet irradiation in experi-Schubnikov, A. V., and Brunovski, B. K., piezo-electric amorphous mental rickets, A., 1331. Schulz, E. See Roginsky, S. Schulz, E. H., technological significance of gases in metals, B., 211. and crystalline substances in an electric field, A., 383. Schubnikov, A. V., and Lämmlein, G., crystallisation at the surface Schulz, E. H., and Wimmer, A., properties of Thomas rail-steel, B.,

```
Schulz, E. H. Seo also Verein. Stahlwerke A.-G.
Schulz, F., determination of benzene and toluene in gases, B., 421.
Schulz, G. See Lorenz, R.
Schulz, K. See Busch, M.
Schulz, L. See Blumann, A. Schulz, W. See Meyerhof, O.
Schulze, A., monel metal. I. Electrical and thermal properties
  and magnetostriction, A., 126.
thermal expansion of iron alloys, B., 476.
Schulze, B., excitation of visible "red" and "blue" argon
  spectra by electron collision, A., 965.
Schulze, Bruno, determination of wool in raw- and wood-felt pastes
  by chemical means, B., 513.
Schulze, G., determination of lactose [in milk] from the refraction
  of the calcium chloride serum, B., 955.
Schulze, G. See also Angerhausen, J.
Schumacher, E. E., and Basch, E. J., lead-tin-cadmium as a
  substitute for lead-tin wiping solder, B., 175.
Schumacher, E. E., and Ferguson, L., diffusion of water through
  rubber, B., 256.
Schumacher, E. E., and Western Electric Co., electron emitter,
  (P.), B., 362.
Schumacher, H., lactic acid of the blood in hepatic disease, A., 717.
Schumacher, H. See also Embden, G.
Schumacher, H. J., and Sprenger, G., decomposition of nitrogen pentoxide. II., A., 515.
  reaction between nitrogen pentoxide and ozone. II., A., 515.
  existence of higher oxides of nitrogen, A., 897.
  preparation and properties of nitryl chloride, A., 1155
  nitryl chloride: formation and thermal decomposition, A., 1395.
Schumacher, H. J., and Wagner, C., mechanism of the photo-
  chemical decomposition of chlorine monoxide and of the
  chlorine-sensitised decomposition of ozone, A., 1404.
Schumacher, H.\ J. See also Bodenstein, M., Lewis, B., and Riesenfeld, E.\ H.
Schumacher, W. See Grasselli Dyestuff Corporation.
Schumann, C. Seo Karr, W. G.
Schumann, Curt. See Grasselli Dyestuff Corporation.
Schumann, R. See Steudel, H.
Schumm, O., formation of hæmin derivatives by pyrogenic reactions. III. Decarboxylation of porphyrins and iron
  porphyratins; preparation of ætiopyroporphyrin and ætio-
  mesoporphyrin; preparation of ætioporphyrins from hæmin by
  the paraffin-phenol-oxalic acid method; conversion of hæmin
  into pyroporphyrin; degradation of Neneki's hæmatopor-
  phyrin, hæmateric acid, uroporphyrin, dimethoxyhæmin di-
methyl ester, and hæmatohæmin by resorcinol, and of hæmin by
                     bacteriochemical production of coprato-
  hydroxyquinol;
  porphyrin, A., 581.
Schundler, H. O. See Dwyer, T. A. W
Schupp, H. See Berl, E.
Schur, M. O. See Brown Co., and Richter, G. A.
Schurecht, H. G., and Pole, G. R., effect of water in expanding
  ceramic bodies of different compositions, B., 919.
Schuster, strengthening of yeast by fermentation under pressure.
  B., 373.
Schuster, C. See Kälberer, W. Schuster, E. H. J. See Rosenheim, O.
Schuster, R., manufacture of electrolytes, (P.), B., 605.
Schut, IV., determination of formic acid in vinegar, B., 491.
Schuth, E. See Heinrich, F.
Schutt, K. See Moser, L.
Schuttl, D. J. See Palmer, L. S.
Schving, P. See Sabetay, S.
Schwab, E. See Abderhalden, E.
Schwab, G. M., and Berninger, E., invasion and solvation of
  gases in water, A., 24.
Schwab, G. M., and Pietsch, E., topochemistry of contact catalysis,
    A., 519.
  topochemistry of contact catalysis. II. Experimental case of
    alinement, A., 519.
```

topochemistry of contact catalysis. III. Localisation of

Schwab, G. M., and Schmidt, Hildegard, catalytic decomposition

treating [improving the colour of] sulphur, (P.), B., 814.

catalytic activity, A., 1399.

of ammonia. II., A., 890, 1399

Schwab, G. M. See also Pietsch, E.

(P.), B., 54.

```
Schwabe, K. See Müller, Erich.
                                                                           Schwabe, R. See Bockmühl, M. Schwärzel, B. See Grasselli Dyestuff Corporation.
                                                                           Schwaibold, J., determination of iodine (halogen) in organic
                                                                                 material, A., 337.
                                                                              determination of iodine, especially in minute quantities [in
                                                                                organic substances], A., 1256.
                                                                           Schwaibold, J. See also Scharrer, K. Schwalbe, C. G., wet carbonisation of wood and sulphite waste
                                                                                liquor, B., 552.
                                                                              carbonising a cellulose-containing substance such as wood, peat,
                                                                                etc., (P.), B., 885*.
                                                                              carbonising the organic constituents of sulphite-cellulose lye,
                                                                           (P.), B., 1042.
Schwalbe, C. G., and Ekenstam, A. af, heartwood of the pine. I.
                                                                                 Adsorption and infiltration experiments with sapwood and
                                                                           heartwood of pine and spruce. II. Extraction by organic solvents and alkalis, B., 166.
heartwood of the pine. III. Heating in sealed tubes, B., 240.
Schwalbe, H., theory of sizing [of paper], B., 49.
                                                                           Schwarcman, A., and Spencer Kellogg & Sons, Inc., treatment of
                                                                              [vegetable] oils, (P.), B., 63.
                                                                           Schwartz, E. See I. G. Farbenind. A.-G. Schwartz, G. L. See Du Pont de Nemours & Co., E. I.
                                                                           Schwartz, G. M., dyscrasite and the silver-antimony constitution
                                                                              diagram, A., 787.
                                                                           Schwartz, H. A. See Nat. Malleable & Steel Castings Co.
                                                                           Schwartz, K. W., and Chromium Corporation of America, electro-
                                                                              deposition of chromium, (P.), B., 781.
                                                                           Schwartze, E. W., and Hann, R. M., utilisation of the spectro-
                                                                              photometer in the determination of minute amounts of alu-
                                                                              minium, A., 901.
                                                                           Schwartze, E. W., Hann, R. M., and Keenan, G. L., ouabain
                                                                              (g-strophanthin or acocantherin) as a physiological standard
                                                                              for digitalis, strophanthus, and squill, A., 1105.
                                                                           Schwarz, Adolf. See Bockmühl, M.
                                                                           Schwarz, Alfred, apparatus for distilling [cracking] oil, (P.), B.,
                                                                              881.
                                                                           Schwarz, Alfred, and Coal & Oil Products Corporation, apparatus
                                                                           for cracking [petroleum] oil, (P.), B., 881.
Schwarz, Alfred, and Petroleum Sand Products Corporation,
                                                                              treating [cracking] hydrocarbons, (P.), B., 234.
                                                                           Schwarz, B. F., influence of the electric current on wood, B., 599. Schwarz, E. I. See Kremann, R.
                                                                           Schwarz, F., benzidine reaction [for blood], A., 587.
                                                                            Schwarz, K., simple micro-mol. wt. determination, A., 1416.
                                                                           Schwarz, R., silicophosphoric acids, A., 39.
                                                                              synthesis of kaolin, A., 1035.
                                                                              germanium. I., A., 1407
                                                                           Schwarz, R., and Giese, H., peroxides of titanium, zirconium,
                                                                              hafnium, and thorium, A., 39.
                                                                           Schwarz, R., and Kunzer, W., influence of the silent electric
                                                                                discharge on hydrogen sulphide, A., 1246.
                                                                              effect of electric discharges on chemical reactions, A., 1402.
                                                                           Schwarz, R., and Reidt, E. [with Chudoba, K], ceramic mixtures
                                                                              of high m.p.; systems kaolin-alumina-felspar and kaolin-zirconia-felspar, A, 1138.
                                                                           Schwarz, R., and Richter, H., silicic acids. V., A., 280.
                                                                           Schwarz, R., and Schenk, P. W., activation of sulphur, A., 1151.
                                                                           Schwarz, S. C. Sec Ripley, R. R.
                                                                           Schwarzberg, B., periodic and continuous tanning processes, B.,
                                                                              368.
                                                                           Schwarzenbach, G., effective strength of linking in polyatomic
                                                                              molecules, A., 983.
                                                                            Schwarzenbach, G. See also Bradley, W.
                                                                           Schwarzlose Söhne G.m.b.H., J. F., thickening ingredient for
                                                                              liquids for altering the colour of hair, (P.), B., 849.
                                                                           Schweder, W., [control of] water-gas manufacture, B., 382
                                                                              production of mixtures of water-gas and gases of distillation,
                                                                                (P.), B., 506.
                                                                           Schweers, C. See Szivessy, G. Schwegler, C. C. See Strosacker, C. J.
                                                                           Schweinitz, H. D. von. See Haber, F.
                                                                           Schweitzer, E. See Gerlach, W.
                                                                            Schweitzer, F.
                                                                                             See Abderhalden, E.
                                                                           Schweitzer, H. See Grasselli Dyestuff Corporation.
Schwab, J., jun., [rubber] tube lining, (P.), B., 652.
Schwab, J. W., and Texas Gulf Sulphur Co., treatment of sulphur,
                                                                            Schweitzer, L., analysis of speculum metal, B., 602.
                                                                            Schweitzer, O. See Staudinger, H.
                                                                            Schwenk, E., manufacture of 2-hydroxy-3-carboxynaphthalene
                                                                              [$-hydroxynaphthoic acid] and its metallic salts, (P.), B., 388.
```

Schwenk, E. [with Knob, M., and Stein, H.], action of carbon dioxide on sodium β-naphthoxide; the Kolbe-Schmitt synthesis, A., 696. Schwenk, E., Reichner, K., Knob, M., and Verein für Chemische & Metallurgische Produktion, dyeing animal fibres [with ice colours], (P.), B., 811. Schwenke, B., detection of ketonio substances in urine, A.,

alkali content of medicinal glass, B., 323. Schwenke, H. See Zeche de Wendel.

Schwerdtel, F., conversion of blood pigment into bile-pigment,

Schwicker, A., iodo-oxidimetrio determinations, A., 782. iodometric determination of thiocyanate, A., 899. iodometric determination of phosphorous acid, A., 1158. Schwietzke, G. See Röntgen, P.

Schwonke, determination of starch in sound and frozen potatoes, B., 733. Schwyzer, J., manufacture of argentum proteinicum, argentum

colloidale, and other organio silver compounds, B., 111. Scientific and Industrial Research, Department of, Fuel Research, Bristol and Somerset coalfield; carbonisation of "Parkfield large gas " coal, B., 4.

Yorkshire, Nottinghamshire, and Derbyshire coalfield; South

Yorkshire area; Parkgate seam, B., 269.
Scientific and Industrial Research, Department of, Gas Cylinders
Research, ordinary commercial cylinders for the "permanent" gases; summary of recommendations (revised), B., 326. Scofield, E. L. See Gray, E. D.

Scoffield, T. E. See Oberle, A. Scopinaro, E. See De'Conno, E. Scorpio, E. Sco Muller, G. L.

Scortzeanu, V. See Nenitzescu, C. D.

Scott, A., geology of the ball clays of South Devon, A., 536.

Scott, A. See also Woodall-Duckham (1920), Ltd.

Scott, A. C., prevention of caking of crystals, powders, etc., (P.), B., 268.

explosives, (P.), B., 304.

Scott, A. C., and Mexco, Ltd., explosive, (P.), B., 152\*, 265\*. Scott, A. F., solubilities of the soluble electrolytes. I. Relationships between the temperature coefficients, A., 997.

Scott, D. A. See Culhane, K., and Harington, C. R. Scott, E. L. [with Dotti, L. B.], reducing power [blood-sugar] of filtrates from the blood of the rabbit, A., 588.

Scott, G. A., isotherms of hydrogen, carbon monoxide, and their mixtures, A., 1227.

Scott, G. L. See Bird & Co. Scott, J. R., behaviour of Prussian-blue and some other ferrocyanides in rubber, B., 445.

Scott, R. W. See Corson, B. B.

Scott, S. G., phosphorus deficiency in forage feeds of range cattle, B., 448.

Scott, S. G. See also Johnson, A. H. Scott, T. T., and Scott Furnace Co., furnace, (P.), B., 398.

Scott, W., and Rubber Service Laboratories Co., [accelerators for] manufacture of vulcanised rubber, (P.), B., 530.

Scott, W. See also Du Pont de Nemours & Co., E. I., and Rubber Service Labs. Co.

Scott, W. D. See Farmer, E. H. Scott, W. McL. See Macdonald, J. Q.

Scott Furnace Co. See Scott, T. T.
Scotti-Foglieni, L. See Nicloux, M.
Scottish Dyes, Ltd. See Anderson, L. B., Bangham, P. F., Barnes,
R. S., Beckett, E. G., Fairweather, D. A. W., Hereward, H. W., Hooley, L. J., Smith, William, Thomas, J., Todd, W. M., and Wylam, B.

Schuftan, P., [oxides of nitrogen in] coke-oven gas, B., 765. Schulte, F. See Grasselli Dyestuff Corporation.

Sciuto, D, simple qualitative analysis of alloys, A., 1031.

Scriven, H. A., and Guise, B. F. G., treatment of metal articles for prevention of tarnish and rust, (P.), B., 526.
Scroggie, A. G., silicododecatungstic acid. I. Preparation of

silicotungstio acid, A., 779.

Scroggie, A. G., and Clark, G. L., crystal structure of anhydrous silicotungstic acid and related compounds, and their probable molecular formulæ, A., 246.

Scudder, S. A., precipitation of magnesium ammonium phosphate crystals during the growth of bacteria in media containing nitrogenous substances, A., 220.

Scullin, C. J. See Day, C. M.

Scurti, F., and Piano, G., behaviour of Kosseir's phosphate in neutral soils, B., 904.

Seaber, W. M. See Bennett, C. T.

Seager, L. D., Verda, D. J., and Burge, W. E., stimulation of metabolism by alcohol, A., 1335.

Seailles, J. C., manufacture and purification of alumina, (P.), B.,

Seailles, J. C., and Société Lap, manufacture of moulded pieces by using hydraulic binding material, (P.), B., 396.

Sealey, A., coating, charging, or treating yarn or thread, cord, twine, wire, etc. with solid or liquid substances in being wound on to or into bobbins, skeins, etc., (P.), B., 641. Searle, A. B., modern facing bricks, B., 816.

Searle, G. O., rotting of textiles by micro-organisms. I. A laboratory test, B., 847.

Searle, R. M., carburetted water-gas apparatus, (P.), B., 880. Searle & Co., D. E., manufacture of alkali bismuth tartrates, especially intended for the treatment of syphilis, (P.), B., 339. Sears, G. W., fusion of raro metal ores. III. Determination of tantalum and niobium, A., 287.

Sears, H. J., and Gourley, M. F., carbohydratc metabolism of P. aëruginosa (B. pyocyancus), A., 101.
Sebelien, J., Bull's rapid method of determining fat in fish, meat,

and other animal or vegetable products, B., 658.

Sebor, J., thorium emanation, A., 116. Sebrell, L. B. Sec Carson, C. M., Cummings, A. D., and Goodyear Tire & Rubber Co.

Security Manufacturing Co. See Chambers, P.

Sédallian, P., Leulier, A., and Clavel, (Mme.), distribution and stability of the antigenic properties of diphtheria toxin; rôle of non-specific colloids, A., 220.

Sédallian, P. See also Leulier, A.

Sederholm, P., and Benedicks, C., overvoltage on metals, A., 1393. Sederholm, P. See also Benedicks, C.

Sedlaczek, A., selenium toning processes, B., 227.

Seebach, F., and Bakelite Ges.m.b.H., purification of phenolformaldehyde resins, (P.), B., 256\* artificial resin and its manufacture, (P.), B., 530.

manufacture of press masses from phenol-formaldehyde resins, (P.), B., 729\*

Seebach, M., production of corrosion faces with precious stones, A., 18.

Seel, H., action of iron on the resting metabolism of rachitic rats, A., 842.

Seel, H. See also Kochmann, M. Seel, P. C., non-static and anti-static photographic films and film bases therefor, (P.), B., 38. Seeles, H. See Lipp, P.

Seelig, S., apparatus for cracking oils, (P.), B., 1007\*.

Seeliger, R. See Schmick, H. Seelkopf, K. See Börnstein, E. Seemann, H., demonstration of polarisation of X-rays in a Lilienfeld X-ray tube, A., 869.

Seemann, H., and Schotzky, K. F., optical line gratings for X-ray spectral analysis in the region 1—2 A., A., 984.

Seemann, H. J., electrical conductivity of carborundum, A., 495. influence of pressure from all sides on metallic conductivity of low temperature, A., 633.

Seemann, H. J., and Vogt, E., superstructure and magnetic susceptibility in the system copper-gold, A., 1225.

Seer, C. See Scholl, R.

Seferiadis, B., extraction of essential principles or gums from tobaccos of all kinds, (P.), B., 189.

Segall, B., reduction of thoria by hydrogen, B., 16. Segay, A., ignition of fire damp by explosives, B., 379.

explosives for use in mines containing firedamp and like gases, (P.), B., 455.

Seger, E. See Küng, A. Seghezzo, S. See Sensi, G.

Segoria, M., treatment of leather, (P.), B., 730. Segré, É., quantum theory of fluorescence, A., 979. Seguin, (Mile.) L. See François, M.

Sehrt, E., enzymic action of the muscle of a mummy 3000 years old (precipitin reaction, glycolysis, and respiratory enzyme), A., 1098.

Seib, C. See Grasselli Dyestuff Corporation.

Seibert, A. F. Seo Leonard, C. S. Seidal, F., and Giani, A., preserving liquid nutriment such as milk and the like, (P.), B., 995.

Seide, O., and Gorski, J., derivatives of phenarsazine, A., 1321.

Seidel, C. See Gerlach, M.

Seidel, C. F. See Ruzicka. L.

Seidel, F., aa- and aa'-disubstituted-aa'-dihydro-ββ'-benzofurans,

Seidell, A., vitamin-B from brewer's yeast, A., 959.

activity and nitrogen content of fractions obtained in the concentration of antineuritic vitamin of brewer's yeast, A.,

Seidenfaden, W. Sco Zitscher, A. Seidengart, C. Seo Jablczyński, K.

Seldenschnur, F., and Jäppelt, A., reducing power of brown-coal coke, B., 742.

Seidler, E., production of magnesium salts or magnesia from waste material containing magnesium, (P.), B., 517.

Seidler, P., production of large crystals, (P.), B., 207.

Seidler, P. See also Chem. Fabr. Gross-Weissandt G.m.b.H. Seiter, T., distilling and cracking or decomposing bodies such as oils and the like by contact with salt or metal melts, (P.), B., 971.

Seigle, A. A. F. M., distillation and depolymerisation of liquid or liquefiable hydrocarbons, (P.), B., 314\*

Seil, G. E., and Koppers Co., gas purification process, (P.), B., 706.

Seiser, A., Necke, A., and Müller, Hugo, electrolytic determination of small quantities of lead, A., 286.

Seith, W., conductivities of solid lead chloride and lead iodide, A., 1136.

Seith, W. See also Hevesy, G. von.

Seitz, A., adsorption of dyes by the serum in lead poisoning, A.,

Seitz, E. O., change in the surface tension of some solutions of univalent chlorides with time, A., 758.

Seiwell, H. R., phosphate content and hydrogen-ion concentration of the surface water of the English Channel and southern North Sca, June 18-22, 1928, A., 45.

Seka, R., Schreckental, G., and Heilperin, P. S., pyridanthrone and anthracoumarin syntheses. II., A., 1460.

Sekera, F., soil reaction and fertiliser requirements, B., 67. intake of nutrients and root development of barley, B., 67. mineral changes in barley, B., 67. new method of soil analysis, B., 68.

Seki, I., alumina from volcanic ash as a source of aluminium, B., 977.

Seki, K. See Kase, K. Sekito, S., X-ray investigation of the internal stress in carbon steels, A., 631.

relation between the lattice constant and the density of solid solutions, A., 874.

lattice constants of quenched steels, A., 986.

Selden Co., and Jaeger, A. O., contact sulphuric acid process, (P.), B., 94, 172\*, 208\*.

catalytic oxidation of organic compounds, (P.), B., 236, 275, 673\*, 806.

catalytic apparatus, (P.), B., 343\*, 461\*, 665, 799. purification of crude anthracene, (P.), B., 550\*.

catalytic apparatus [for gaseous-phase oxidations, reductions, etc.], (P.), B., 628

catalytic removal of hydrogen- or oxygen-containing groups from organic compounds, (P.), B., 672.

carrying out catalytic molecular association [condensation] of organic compounds, (P.), B., 672.

base-exchange bodies [catalysts], (P.), B., 680.

catalytic hydrogenation of non-nitrogenous organic compounds, (P.), B., 806.

catalytic reduction and hydrogenation of organic nitrogen compounds, (P.), B., 806.

Selden Co., Jaeger, A. O., and Canon, F. A., purification of phthalic anhydride, (P.), B., 672.

Selden Co. See also Bortsch, J. A., Canon, F. A., Deutsch, L., Fairweather, D. A. W., Jaeger, A. O., and Norton, R. A.

Selden Research & Engineering Corporation. See Jaeger, A. O. Seliber, G., reduction of sulphates by micro-organisms in presence of fats, A., 608.

Seligman, R., continuous pasteurisation of black beers, B., 186.

Seligsberger, L. See Bergmann, M.

Seljakov, N., nature of martensite, A., 245. Seljesaeter, K. S., and Western Electric Co., Inc., [lead] alloys and their manufacture, (P.), B., 821.

Selle, H. See Haid, A.

Sellman, N. T. See Spencer Thermostat Co.

Sellschop, J. P. F., and Salmon, S. C., influence of chilling on

certain crop plants, B., 68. Selman, R. F. W., and Fletcher, P. B., kinetics of the interaction of esters with potassium alkoxides. I. Reaction between potassium ethoxide and ethyl acetate in ethyl alcohol-water mixtures, A., 1018. Selnes, W. E. See Ebbutt, F.

Selter, G. E. See Embden, G. E.

Selva, R. J. See Deulofeu, V. Selwood, P. W., and Hopkins, B. S., rare earths. XXXI. Ionic migration and magnetism in the separation of the rare earths, A., 901

Selwood, P. W. Sec also Quill, L. L.

Selwyn, E. W. H., are spectra in the region 1600-2100 A., A., 860.

Sem, M. O., and Norske Aktieselskab for Elektrokemisk Industri of Norway, [self-baking] electrode for electric furnaces, (P.), B.,

Semelet, C. See Boutaric, A.

Semenov, N., theory of chemical reaction velocity, A., 514. kinetics of combination of hydrogen and oxygen, A., 514.

Semenzov, A., [configuration of pentaerythritol], A., 538. Russian chemical nomenclature, A., 904.

Semer & Co., G.m.b.H., extraction of saps, and the impregnation, staining, or drying of timber logs, (P.), B., 97.

Semeria, G. B., and Somigliano, B., dioximes. LII., A., 911. Semet-Solvay Co. See Osborne, F., and Torrey, B., jun.

Semichon, L., physiological selection of enzymes by alcohol, A.,

1339. Semichon, L., and Flanzy, M., determination of ethyl alcohol by chromic oxidation, A., 1266.

determination of alcohol in wines and spirits, B., 449.

Semiganovski, N. N. See Zelinski, N. D.

Semp, H. See Schoil, R.

Sen, A. K. See Mitter, P. C. Sen, B. K. See Bose, P. K.

Sen, H. K., and Basu, U., heterocyclic compounds. IV. Inter action of ethyl cyclohexanene-2-carboxylate with arylamines. I. Synthesis of tetrahydrophenanthridones, A., 935.

Sen, H. K., and Chatterjee, H. N., ignition temperature of some gases, A., 1016.

Sen, H. K., and Mondal, K., alkylation of hydroxymethylene-

cyclohexanones, A., 67. Sen, H. K., Pal, P. P., and Ghosh, S. R., ligno-cellulose group. Constituents of water hyacinth (Eichornia crassipes), A., 1348.

Sen, K. B. See Spencer, E. Sen, K. C., adsorption by metallic hydroxides. VI. Adsorption of anions in relation to their coagulative action and their

strength. VII. Adsorption isotherms and the mechanism of the adsorption of acids and bases by hydroxides, A., 1140. Sen, K. C., and Mitra, N. N., time-dilution curves in hæmolytic

systems, A., 340. hæmolytic behaviour of mixtures of hæmolytes, A., 589.

behaviour of hamolytic, complement-free hamolytic, and normal sera in presence of chemical hæmolysers, A., 951.

Sen, K. C., Ray, A. C., and Mitra, N. N., hemolysis, A., 340. effect of alkali on oleate and taurocholate hæmolysis, A., 1327. Sen, K. C. See also Ray, A. C.

Sen, N. K., jute seeds (Corchorus capsularis). II. Composition of corchorus oil, A., 477.

Sen, N. R., separation of hydrogen lines in parallel and crossed electrical and magnetic fields, A., 1115.

Sen, R. N., and Banerjea, K. N., aldehydofluorescein and dyes derived from it, A., 1310.

Sen, R. N., and Ghosh, B., azotriphenylmethane and azopyronine dyes (meta series), B., 89.

Sen, R. N., and Kar, K. C., aldehydophenolphthalein and dyes derived from it, B., 350.

Sen, R. N., and Mukherji, A., condensation of esters with resorcinol,

dimethylaniline, and m-diethylaminophenol, A., 1310. Sen, R. N., and Sen-Gupta, S. C., condensation of di-o-thiobenzoic acid with aromatic hydroxy-compounds, A., 934.

Sen, S., reduction of cuprous chloride, A., 1024. Sen, S. See also Datta, S.

Senda, N., and Uyeda, Y., cellobiose octacetate, B., 319.

Senderens, J. B., preparation of ethers of aromatic alcohols by catalytic action of alkali hydrogen sulphates, A., 695.

Sendlinger Optische Glaswerke G.m.b.H. See Eckert, F.

Sendrail, M., study of sugar regulation by the insulin tolerance test, A., 1201.

tion with powdered aluminium, A., 1030.

B., 350.

Seyewetz, A., and Blanc, J., fluorescence of dyes in Wood's light,

Sevewetz, A., and Blanc, J., fluorescence of dyes in Wood's light Sendroy, J., jun., and Hastings, A. B., activity coefficients of and its application to their identification, B., 845\*. certain acid-base indicators, A., 765. Sendroy, J., jun. See also Van Slyke, D. D.Seyewetz, A. Sce also Lumière, A. Senftleben, H., demonstration of the direct and reverse trans-Seyfarth, H., structure of zirconium silicide, A., 18. extinction law for various atoms, A., 113. formations of both forms of hydrogen, A., 982 Senttleben, H., and Germer, E., detection of dissociation of halogen molecules effected directly by irradiation, A., 1209. Seyffert, C. See Kuhn, R. Seymour, C. L., magnetisable element, (P.), B., 783. Shackelford, O. See Thermal Engineering Corporation. Shaeffer, E. J. See Rogers, F. M. Sengson, P., refining qualities of Philippine raw sugars, B., 372. Sen-Gupta, D. N. See Mahanti, P. C. Sen-Gupta, M. M. See Barkla, C. G. Shafer, IV. See Ellis, J. H. Sengupta, P. N. See Mukherjee, S. K. Sen-Gupta, S. C. See Sen, R. N.Shafor, R. W., effecting a reaction between sucrose and quicklime, (P.), B., 833.
Shafor, R. W., and Gilchrist & Co., mixing apparatus, (P.), B., Senior, B.J. See Sheehy, E.J.Senior, J. K. See Lunn, A. C. Sennewald, K. See Prandtl, W. 740. Shafor, R. W., Nees, A. R., and Brown, R. J., precipitation See Prandtl, W. apparatus, (P.), B., 499. Shalders, E. W. See Gessman, W. Sensi, G., and Seghezzo, S., rapid detection of the metals of group II: arsenic, antimony, tin, mercury, bismuth, lead, Shallcross, W. M., automatic regulators for coke-oven plants, copper, and cadmium, by means of organic reagents, A., 1412. Sensi, G., and Testori, R., detection of aluminium, iron, chromium, (P.), B., 1007. manganese, zinc, nickel, and cobalt with organic reagents; Shaneman, W. J., and Gallagher, J. J., separation of aluminium as hydroxide from steels, B., 601. application to systematic qualitative analysis, A., 1413. Sensible Heat Distillation, Ltd. See Nielsen, H. Shankland, R. V. See Bachmann, W. E. Shannon, E. V. See Palache, C., and Ross, C. S. Serailian, M. K., concentration of fruit juices and other liquids Shapiro, C. V., Raman spectrum and fluorescence of benzene, A., containing aromatic constituents, (P.), B., 492. Serejski, M., artificial elevation of lipin content of central nervous 1127. system. I., A., 93. Sereque, A. F. See Carpenter, T. M. Shapiro, C. V., and Gibbs, R. C., ultra-violet absorption spectra of benzene and toluene in alcoholic solution, A., 1363. Shapiro,  $C.\ V.$  See also Gibbs,  $R.\ C.$  Shapiro,  $S.\ L.$  See Kazakov,  $A.\ L.$ Sergeiev, M., influence of temperature on the precipitation of nickel carbonate, B., 775. Sergeiev, M. See also Markman, A. Shapley, C., flotation process, (P.), B., 250. Shaposhnikov, V. N., and Zakharov, I. P., butyric acid ferment-Serowy, F., specific heats of magnesium sulphate solutions of various concentrations between 16° and 100°, A., 26. ation of calcium lactate, A., 1200. Serres, (MUc.) A., magnetic properties of iron sesquioxide and Sharma, J. N. See Hildebrand, J. H. Sharman, C. F., secondary electron emission from solid metal some ferrites above their Curie point; conservation of the surfaces, A., 618. paramagnetism constant in these compounds, A., 752. Servel, Ltd. See Cook, C. H. Sharp, F. L. See Imperial Chem. Industries, Ltd. Sesma, R., production of direct positives, B., 661.
Sessions, A. C., and Shive, J. W., determination of inorganic Sharp, G. I. See Groves, L. G. Sharp, J. E. See Brown, R. J. See Groves, L. G. hen eggs, B., 795. Sharp, T. M., alkaloids of Indian aconites. II.  $\psi$ -Aconitine, A., 201. nitrogen in plant extracts, A., 960. Sesta, L., artificial preparation of diamonds, A., 495. Seth, J. B., and Anand, C., changes in the resistance of nickel wire with stretching, A., 249. Seth, J. B., Anand, C., and Dayal, M., change in the intensity of Sharp & Dohme, Inc. See Dohme, A. R. L., and Hirzel, H. Sharples Specialty Co., and Jones, L. D., refining petroleum eils, magnetisation of an iron wire on stretching, A., 249. Seth, J. B., Anand, C., and Mahajan, L. D., liquid drops on the (P.), B., 348. same liquid surface, A., 381.

Seto, H., electrolytic zinc refining. II. Influence of foreign centrifugal machines, (P.), B., 459. Sharples Specialty Co. See also Jones, L. D. Sharrock, C. W., construction of road and similar surfaces, (P.), elements on the hydrogen overvoltage, B., 648. Seto, I., m. p. of mixtures of cyclohexane and benzene, A., 1374. B., 558. Settimj, L., chemical composition of certain food pastes and the Shattuck, H. F., Killian, J. A., and Preston, M., determination of bilirubin in blood, A., 210. modifications they undergo when boiled in water, B., 146. analysis of egg paste, B., 492 Shaw, C., dyeing of wool and silk, (P.), B., 15\* Shaw, C. F., measurement of "suction forces" in soil, B., 296. Sctzer, W. C. See Pierce, J. S. Shaw, F. J. F., and Ram, K., production of cigarette tobacco by Sevag, M. G., device for carbon and hydrogen analysis of volatile, explosive, and easily carbonisable organic liquids, A., 459. flue-curing, B., 417. Shaw, G. R. See Brit. Thomson-Houston Co., Ltd. Seventahl, J. F., method of colour photography, (P.), B., 265. Shaw, J. A., rapid method for determination of phenols, B., 771. Sever, W., jun., and Speakman, J. B., manufacture of artificial textile fibres [possessing wave or curl], (P.), B., 14. manufacture of artificial textile fibres, (P.), B., 49, 676. Shaw, J. A. See also Koppers Co. Shaw, J. C., refrigerating apparatus, (P.), B., 802.
Shaw, J. F. See Lander, C. H.
Shaw, M. B., Bicking, G. W., and Streiter, O. G., experimental Sevin, E., photo-electric effect and the continuous X-spectrum, A., 483. theories of the continuous X-spectrum and of the Compton production of roofing-felts, B., 816. Shaw, P. E., tribo-electricity and friction. IV. Electricity due to air-blown particles, A., 249. effect, A., 734. Sevon, J. See Routala, O Sexl, T., quantum theory of the atomic nucleus, A., 623. Shaw, W. M., utility shaking machine, A., 672. Shaw, W. S., tanning of hides, (P.), B., 865.
Shawen, E. W., and Arnett, A. C., production of water-softening calculation of radioactive decay constants by wave mechanics, A., 1125. silicate, (P.), B., 171.
Shcherba, S. V., experiments with lime and phosphates on the the differential equations of the treatment of radioactive α-particle emission in wave mechanics, A., 1125. Kriukovo and Volokolamsk experimental plots in 1925, B., 410. Sexton, W. A. See Heilbron, I. M. Seydel, H., benzoic acid salt of aminobenzoic esters, (P.), B., Shcherbakov, I. G., electrolytic production of potassium ferricyanide from potassium ferrocyanide, B., 1013. Shea, T. F. See Tartar, H. V. Shear, M. J., Kramer, B., and Resnikoff, L., composition of bone. Seyer, W. F., and Allen, J. S., iodine values of lubricating oils before and after use in automobile engines, B., 931. Seyer, W. F., and Rees, A. F., hydrocarbons in Peruvian petroleum VIII. Conductivity titrations of calcium ions, A., 1326 Shear, M. J., Washburn, M., and Kramer, B., composition of bonc. VII. Equilibration of serum solutions with calcium having b. p. below 150°, B., 231. Seyewetz, A., determination of nitric nitrogen by alkaline reduc-

hydro on phosphate, A., 1326. Shear, M.J. See also Kramer, B.

Sheard, C. See Taylor, N. W.

Shearer, R. See Cameron, D. H.

Shedlovsky, T. See MacInnes, D. A. Sheehy, E. J., and Senior, B. J., effect of cod-liver oil feeding on the calcium and phosphorus content of cows' milk, A., 1497. Sheffield, W. H., manufacture of casein, (P.), B., 698.

Shell Development Co. See Perelis, W. J.

Shellenberger, R. See Fuller Lehigh Co.

Shelton, G. R., pyrophyllite, a new ceramic raw material, B., 246. Shelton, G. R. See also Thorvaldson, T. Shelton, R. S. See Marvel, C. S. Shen, C. See Spengler, O.

Shen, D. See Germann, F. E. E.

Shen, T. C. See Adair, G. S.

Shenstone, A. G., secondary diffraction maxima of spectral lines, A., 1208.

Shenstone, A. G. See also Russell, H. N.

Shepard, N. A. See Spear, E. B. Shepard, W. L., and Beals, E. A., gas-producing apparatus, (P.), B., 45.

Shepherd, F.J., and Ilford, Ltd., concentration of gelatin and other gelatinising materials, (P.), B., 693.

Shepherd, J. F., deformation study of cobalt oxide-iron oxidesilica mixtures, B., 683.

Shepherd, M., accurate determination of the gasoline content of natural gas and analytical separation of natural gas by isothermal fractional distillation, B., 802.

Shepherdson, A. See Baddiley, J., Brit. Dyestuffs Corporation, Ltd., and Imperial Chem. Industries, Ltd.

Sheppard, F. See Everett, M.  $\hat{R}$ 

Sheppard, J. R., stearic acid in litharge-vulcanised rubber compounds, B., 828.

Sheppard, P. A. See Tyndall, A. M. Sheppard, S. E., primary process in the formation of the latent photographic image, A., 894.

anti-fogging and anti-sensitising effects, B., 151, 493. function of gelatin in photographic emulsions, B., 959.

Sheppard, S. E., and Beal, C. L., production of coherent deposits of organic substances from aqueous dispersions thereof by

electrodeposition, B., 367.
Sheppard, S. E., Carver, E. K., and Houck, R. C., plasticity and

solvation of cellulose esters, B., 390.

Sheppard, S. E., Eberlin, L. W., and American Anode, Inc., manufacture and electrolytic deposition of an aqueous rubber emulsion containing sulphur, (P.), B., 829.

Sheppard, S. E., and Lambert, R. H., grain growth in silver halide

precipitates, B., 977.
Sheppard, S. E., Nietz, A. H., and Keenan, R. L., supermolecular state of polymerised substances in relation to thin films and interfaces, A., 383.
Sheppard, S. E., Schmitt, J. J., and Eastman Kodak Co., hard-

rubber coating composition and its manufacture, (P.), B., 691. Sheppard, S. E., and Trivelli, A. P. H., comparison of some developers for sensitometric standardisation, B., 872.

Sheppard, S. E., and Vanselow, W., lattice energies and photochemical decomposition of the silver halides, A., 408.

Sheppard, S. E., Vanselow, W., and Hall, V. C., photo-voltaic cells with silver-silver bromide electrodes. II., A., 1242. Sheppard, S. E., and Wightman, E. P., effect of environment on

photographic sensitivity. I., B., 151.

effect of environment on photographic sensitivity. II. Effect of certain salts, B., 303

Sheppard, S. E. See also Davis, C. E., Hudson, J. M., and Vanselow, W.

Shereshefsky, J. L., vapour pressures in small capillaries. I. Water vapour. II. [Toluene], A., 128.

Sherman, A. E., and Maynard, I., extraction of moisture from air or other gases, (P.), B., 740.

Sherman, H.C., and Campbell, H.L., influence of food on longevity, A., 211.

Sherman, H. C., and Stiebeling, H. K., quantitative response to varying intake of vitamin-D, A., 1345.

Sherman, H. E., relative vitamin-A content of four oriental foods; relative content of water-soluble vitamin-B in thirty oriental foods; relative water-soluble vitamin-C content of nine oriental fruits and vegetables; certain proteins added to mung beans, or to white or red Sorghum vulgare, increase the fertility of mice, B., 621. Sherman, H. E., and Wang, T. C., chemical analysis of thirty

seven oriental foods; calcium, iron, and magnesium content of sixteen Chinese foods, B., 621.

Sherman, H. E. See also Sherman, P. L.

Sherman, J. C., and Brown Co., margarine composition, (P.), B.,

Sherman, P. L., and Sherman, H. E., tensile strength of abacá fibres in relation to their acidity, B., 166.

Sherman, P. L. See also Bañuelos, T. Sherrard, E. C., and Kurth, E. F., sequoyite [pentahydroxy. methoxycyclohexane], a cyclose from redwood (Sequoia sempervirens), A., 1442.

Sherrill, M. L., Baldwin, C., and Haas, D., isomerides of  $\Delta\beta$ -pentene. II.  $\Delta\beta$ -Pentene from  $\beta$ -bromopentane and  $\beta$ -pentanol, A., 1419.

Sherrill, M. L., Otto, B., and Pickett, L. W., isomerides of  $\Delta\beta$ . pentene. I. Δβ-Pentene from γ-bromopentane and γ-pentanol, A., 1419.

Sherwood, C. F., manufacture of bodies [dynamo brushes] from metal powder, (P.), B., 527.

Sherwood, P. K., drying of solids. II., B., 1035.

Sherwood, R. C., effects of wheat drying on milling and baking properties, B., 794.

Sherwood, R. C., and Bailey, C. H., correlation of ash content of

wheat and of flour, B., 186.

Sherwood, R. F. See Schramm, E. Sherwood, T. K., heat transfer in the vulcanisation of rubber, B., 28.

drying of solids. I., B., 153.
Sheshadriengar, K. See Paranipe, G. R.

Shiba, H., and Watanabe, T., X-ray diffraction haloes in aqueous solutions of electrolytes, A., 629.

Shibata, E. See Ishikawa, F

Shibata, R., triphenyltriaminoethylene. I. Synthesis of triphenyltriaminoethylene and some of its derivatives. II. Action of sulphur on triphenyltriaminoethylene, A., 1437.

Shibata, R., Teshima, S., and Asagi, Y., derivatives of dibenzo-dithiazinequinone—vat dyes. II., A., 1085.

Shibata, Y., and Tsuchida, R., asymmetric oxidation, A., 1296. Shibata, Z., heterogeneous equilibrium of tungsten and its oxides with carbon monoxide and carbon dioxide, A., 651.

heterogeneous equilibrium of tungsten and its oxides with hydrogen and water vapour and the dissociation pressure of the oxides, A., 651.

Shiels, D. O., adsorption of sulphur dioxide by platinised asbestos, A., 1000.

adsorption of sulphur dioxide by platinum-black, A., 1000. adsorption of mercury vapour by activated charcoal, A., 1230. sorption of sulphur dioxide, carbon dioxide, and nitrous oxide by activated carbon, A., 1230.

Shiels, D. O. See also Alimand, A. J. Shiffler, W. H. See Randall, M.

Shiga, T., and Kawata, T., fireproof composition, (P.). B., 800. Shigemune, R., fibrous structure of porcelain bodies, B., 96.

Shiigi, K., Donnan membrane equilibrium; change of protein solutions by heating, its effect on the membrane equilibrium, and its relation to the viscosity, A., 1236.

Shikhutzki, J. E., electrothermic manufacture of yellow phosphorus, B., 641.

Shikinami, Y. See Kumagai, T. Shiling, M. S. See Adolph, E. F

Shilkin, N., determination of total and available lime, B., 717. Shilling, W. G., and Partington, J. R., velocity of sound in air, nitrogen, and oxygen, with special reference to the temperature coefficients of the molecular heats, A., 128.

Shilov, E. A., manufacture of ethylene chlorohydrin, B., 805. Shima, G., electrolytic reduction of aldehydes. V. Cinnamaldehyde. VI. Complete reduction of the carbonyl group, A., 521. Shimer, A. A., and Hercules Powder Co., extraction of rosin and

turpentine from wood, (P.), B., 728.

Shimer, E. B. See Shimer, P. W. Shimer, P. W., and Shimer, E. B., casting of ferrous metals, (P.).

case-hardening of metals, (P.), B., 985.

Shimidzu, H., electric dry cell, (P.), B., 605.

Shimizu, S. See Saegusa, H.

Shimizu, T., and Hatakeyama, T., vitamin-A. I. Vitamin-A. choleic acid, A., 726.

Shimizu, Y., electrical investigation of the setting and hardening of rapid-hardening cements, B., 434. Shimmura, T., coking test of Chinese and Japanese coals, B., 461.

Shimoda, T., uric acid, A., 580.

Shimomnra, K. See Kumagawa, H.

Shimoyama, H. Seo Terano, K.

Shimura, Y., and Takagi, K., manufacture of hair toilet oil, (P.), B., 608.

Shinagawa, T. See Murakami, T.

Shinoda, G., röntgenographic study of the improvement of aluminium alloys, B., 602.

X-ray study of castings. I. Perkin's metal, B., 983.

Shinoda, J., and Kawagoye, M., syntheses of polyhydroxychalkones [-phenyl styryl ketones], -hydrochalkones [-phenyl β-phenylethyl ketones], and flavanones. III. Synthesis of hesperetin, A., 189.

constituents of Arctium Lappa. I., A., 1347.

Shinoda, J., and Sato, S., syntheses of polyhydroxy-chalkones [-phenyl styryl ketones], -hydrochalkones [-phenyl β-phenyl-ethyl ketones], and -flavanones. I., II. Synthesis of naringenin and sakuranetin, A., 189.

syntheses of polyhydroxy-chalkones, -hydrochalkones, and -flavanones. IV. Synthesis of 5:7-dihydroxy-3':4'-dimetheriodictyol. V. Synthesis of eriodictyol and homoeriodictyol, A., 701.

Shinoda, J., and Uyeda, S., constituent of the bark of the peach, A., 1113.

Shiperovich, V., and Gurvich, V., separation of naphthenic soaps, B., 585.

Shipley, J. W., frequency and arcing in the alternating-ourrent electrolysis of water, B., 649.

Shipley, P. G. See McCollum, E. V. Shipley, R. A. See Nat. Fire Proofing Co.

Shipley, S. D., and Atlas Powder Co., brushing lacquers, (P.), B., 566.

Shipp, H. L., and Zilva, S. S., metabolism in scurvy. II. Nitrogen absorption and retention of guinea-pigs, A., 92.

Shirov, N. F., preparation of fluorescent substances. I. Sulphides of calcium, strontium, and barium, A., 1025.

Shito, T. See Ogura, K.

Shive, J. W. See Sessions, A. C.
Shive, R. A. See McGavack, J., and Naugatuck Chem. Co.
Shkatelov, V., composition of oleoresin and colophony from Pinus sylvestris, B., 650.

Shobayashi, G. See Abe, R., and Mazume, T

Shoemaker, R. J., and S. & T. Metal Co., anti-friction metal, (P.),

bearing metal and its manufacture, (P.), B., 754.

Shoesmith, J. B., and Mackie, A., nitration of m-acotamido-tert. butylbenzene, A., 549.

Shohl, A. T., rapid calibration of pipettes and burettes, A., 1033. determination of p<sub>H</sub> and carbon dioxide in single small sample of blood-serum, A., 1327. Shohl, A. T., and Bing, F. C., rickets in rats. VIII. Rickets and

tetany, A., 93.
Shôii, H., theory of the plasticity of metals, A., 752, 989.
Shoii, S. See Tanaka, K.

Shôji, T., and Sano, R., evolution of heat by bleaching powder after packing, B., 917.

Shope,  $\hat{R}$ . E., cholesterol ester content of blood-serum and plasma; cholesterol esterase in animal tissues; hypercholesterolæmia of fasting; effect of age on cholesterol of blood-serum, A., 88.

Shope, R. E., and Gowen, J. W., cholesterol and cholesteryl ester in the blood-serum of cattle late in pregnancy and during the early lactation period, A., 206.

cholesterol and cholesteryl ester content of bovine colostrum, A., 209.

Shoppee, C. W., mobile hydrogen tautomerism analogous to the Wagner-Meerwein rearrangement. II. Tautomerism of l(or 5)-hydroxy-2:2:3:3-tetramethylcyclopentan-5(or 1)-ono and its

derivatives, A., 560.

Shoppee, C. W. See also Ingold, C. K.
Shorigin, P., Kizberg, I., Troitzki, N., and Smolyanlnova, E., manufacture of benzaldehyde, B., 934.

Short, W. F., and Stewart, M. L., rearrangement of phenyl benzyl ethers, A., 552.

Short, W. F. Sec also Briggs, L. H.

Shorter, A. E., Boucher, C. L., and Patent Gear Hardening Co.,

Ltd., hardening of metal surfaces [gear wheels], (P.), B., 216. Shorto, C. W. B., apparatus for testing the viscosity of oils, (P.), B.,

Shoup, C. S., respiration of luminous bacteria and the effect of oxygen tension on oxygen consumption, A., 1341. Shoyama, S., pityrol. VI. Distillation of palmitic acid, A., 294.

Shpiner, L. B., effect of ergotamine on blood-sugar level, A., 600. Shrikhande, J. G. Sco Godbole, S. N.

Shriner, R. L., and Anderson, R. J., grape pigments. V. Anthocyans in Ives grapes, A., 192, 1459\*.

Shriner, R.L., and Kleiderer, E.C., chalkones [related to hyssopin], A., 701.

Shriner, R. L., and Ko, L., derivatives of cholesterol, A., 182.

Shriner, R. L., and McCutchan, P., methylated gallic acids, A.,

Shrum, G. M., Patten, C. G., and Smith, H. D., change in optical transparency of certain ultra-violet transmitting glasses after exposure to X-rays and ultra-violet light, B., 245.

Shternov, V. A. See Ulrich, J. L. Shukov, I. I., and Avsejevitsch, G. P., determination of hydrogenion concentration with the antimony electrode, A., 899.

Shukov, I. I., and Schipulina, O. P., adsorption of complex platinum compounds by carbon, A., 1377.
 Shukov, I. I., and Sokolova, M. N., effect of multivalent cations

on some colloid-chemical properties of kaolin, A., 762.

Shulimson, I. A., and American Bosch Magneto Corporation, electrolytic cell, (P.), B., 824.

Shunk, I. V., microbiological activities in the soil of an upland bog in eastern North Carolina, B., 447.

Shurink, H. B. J. See Melle, F. A. van.

Sibaiya, L. See Venkatesachar, B. Sibi, (MUe.) M. See Thomas, P. Sichert, K. See Diemair, W. Sickel, H. See Abderhalden, E.

Sideris, C. P., similarity between physico-chemical and biological reactions, A., 730.

physico-chemical properties of pineapple-stem colloids, A., 763. Sidersky, D., physico-chemical analysis of massecuites, B., 733. Sidgwick, N. V., co-ordinativo combination and the electronio

theory of valency, A., 13.

volatility and structures of azides and aliphatic diazo-compounds, A., 805. Siebenbürger, H. See Soc. of Chem. Ind. in Basle.

Siebert, G., noxious physiological effects of lacquer solvents, B., 137.

Siebert, K. See Gessner, O. Siebert, W. W., cause of mitogenetic radiation, A., 214. mitogenetic radiation of stimulated muscle and of other tissues,

A., 214.
Siecke, H. See Winterfeld, K.
Siecke, W. Seo Metallbank & Metallurg. Ges. A.-G.

Siedentopf, H. See Enger, R.

Siedhoff, W. Seo Werner, E. E.

Siedler, P. See I. G. Farbenind. A.-G.

Siegel, W., volumetric determination of alkali fluorides and silica, A., 1158.

new process for the manufacture of caustic soda and sodium carbonate, B., 281. Siegens, H. Soe Girsewald, C. von.

Siegert. See Freckmann.

Siegle Corporation of America, Inc., G. Seo Culmann, J.

Sieglitz, A. Soe Eichwede, H.

Siegmund, H.O., and Western Electric Co., Inc., [cleaning electrodes of] electrolytic devices, (P.), B., 401.

Siemens, H. von. See Siemens, K. F. von.

Siemens, K. F. von, Siemens, H. von, Franke, A., and (Siemens Gebrüder & Co.), manufacture of moulded bodies [dynamo brushes] from carbon or mixtures of carbon and metal, with metal insertions, (P.), B., 607.

Siemens Aktien-Gesellschaft, F., purification of combustible gas,

(P.), B., 313. Siemens & Halske Akt.-Ges., high-frequency induction furnaces,

(P.), B., 101. improving the properties of iron-beryllium alloys, (P.), B., 133. determining the content of combustible gas in gas mixtures, (P.), B., 197.

cathodes for gas-discharge vessels, (P.), B., 253.

conveyors for baths for treatment of objects, more particularly electrolytic baths, (P.), B., 291.

determination of the amount of carbonic acid contained in flue gases by the thermal conductivity method, (P.), B., 314\*. electrolytic cell, especially for electrolysis of alkali chlorides, (P.), B., 362.

porous body for use as a filter or diaphragm, (P.), B., 420. carrying-out the oxidation or reduction of electrolytes, (P.), B., 650.

Siemens & Halsko Akt.-Ges., [movable] tapping device for electrical furnaces, (P.), B., 783.

thermionic cathodes of high emissivity, (P.), B., 824.

determining the amount of heat given off by a heating body, (P.), B., 875.

magnetic alloys, (P.), B., 1019.

Siemens & Halske Akt.-Ges., and Schenkel, K., [bipolar] depolarising plate for galvanic cells, (P.), B., 823.
Siemens & Halske Akt.-Ges. See also Esmarch, W., Grüss, H.,

Masing, G., Schmick, H., and Swinne, R.

Siemens Gebrüder & Co., and Birnbräuer, E., manufacture of moulding bodies of metals, (P.), B., 525.

Siemens-Reiniger Veifa Ges. für medizinische Technik, ionisation chamber, (P.), B., 481. sealing metal upon glass, (P.), B., 858.

[medical] apparatus for X-ray investigation, (P.), B., 986. Siemens-Schuckertwerke Akt.-Ges., regulating the firing of furnaces, (P.), B., 495.

furnaces for annealing stampings, (P.), B., 724. electrodes for contact rectifiers, (P.), B., 782.

Siemens-Schuckertwerke Akt.-Ges., and Siemens-Schuckertwerke G.m.b.H., electric furnace for annealing metals, (P.), B., 252. electric gas-purifying plant, (P.), B., 252. absorption refrigerating machines, (P.), B., 344.

contrifugal [laundry] washing and drying machines, (P.), B., 514. annealing furnaces, (P.), B., 753. Siemens-Schuckertwerke Akt.-Ges., and Weimers, W., washing

and drying machines, (P.), B., 79.

[domestic] washing and contrifuging machines [for fabrics, etc.], (P.), B., 848.

Siemens-Schuckertwerke G.m.b.H., and Heinrich, R., oleaning gas-purifying apparatus by heating the electrodes, (P.), B., 25. Siemens-Schuckertwerke G.m.b.H. See also Siemens-Schuckertwerke A.-G.

Sierra, F., co-ordination number 5 in hydrates, A., 778. Sieurin, S. E., production of aluminium oxide, (P.), B., 283.

production of iron sponge, (P.), B., 563\*.

Sieurin, S. E., and Edlung, A. S., purification of aluminium oxide, (P.), B., 897\*.

Sievers, H., and Müller, Ernst, metabolism of Bacillus tetani. II. Bases of the culture medium, A., 724.

compounds of mono-, di-, and tri-methylamines, othylencdiamine, and cholino with flavianic acid, A., 916.

Sievert, F. W., evaporator, (P.), B., 420.

Sigaud, M., ultrafiltration dialysis and osmometry by means of collodion sacs, A., 642.

Sigmund, F., influence of ultra-violet light on aldehydes; hexahydrophenylacetaldehyde, hexahydro-β-phenylpropaldehyde, and n-dodecaldehyde, A., 1070.

catalytic effect of platinum-black and platinum oxide in hydrogenation, A., 1449.

Sigmund,  $F_{-}$ , and Haas,  $F_{-}$ , reduction of the secondary hydroxyl group in ricinoleio acid, A., 48.

Sigmund, F., and Uchann, R., catalytic elimination of alcohol from acotals; preparation of unsaturated ethers, A., 539

Sigmund, R., effect of carbon monoxide and other impurities of saturation gas on carbonatation [of sugar solutions], B., 572. Signer, R. See Staudinger, H.

Sikorski, S. F. See Grischkevitsch-Trochimovski, E. Sil, K. M. See Das-Gupta, P. N.

Silamit-Werke Strassmann & Co., Fabr. Feuer- & Säurefester Prod. m.b.H., production of gas, (P.), B., 547.

Silbereisen, K., interfacial tensions of water-n-butyl alcohol. water-isobutyl alcohol, and glycerol-isobutyl alcohol, A., 1141. Silbermann, H. See Fantl, P.

Silbermann, V., printing with indanthrene and other vat dyes, B., 715.

Silberschmidt, R. Seo Barger, G.

Silberstein, A. Sco Zuverkalov, D. Silberstein, F., and Rappaport, F., determination of the respiration. ation of bacteria, tissue cultures, and surviving cells, A., 614. Silberstein, F., Rappaport, F., and Wachstein, M., reducing power

of blood after acid hydrolysis, A., 1477.

intermediate protein metabolism. I. and II., A., 1485. Silberstein, F., and Wachstein, M., production of insulin after administration of lævuloso, A., 1495.

Silberstein, G. See Sandvik, O. Silberstein, J., experimental demonstration of the refining of metals by oxidation, B., 249. rapid determination of vanadium in ferrovanadium, B., 647.

Silberstein, J., and Westinghouse Electric & Manufacturing Co., solder, (P.), B., 330, 1019. Silberstein, J. Soe also Lorenz, R.

Silberstein, L. See Bertrand, G.

Silbert, (Miss) E. P. Soo Niederl, J. B.

Silesia Verein Chemischer Fabriken, production of lead chloride and nitrates from material containing lead and small quantities of gypsum, (P.), B., 17.

stabilising natural or artificial types of caoutchouc, (P.), B., 29. retarding the [photographic] developing action of p-amino-phenol, (P.), B., 151.

Silesia Verein Chemischer Fabriken, and Alaschewskl, G., production of titanium hydroxide, (P.), B., 244.

Silesia Verein Chemischer Fabriken Ida- & Marienhuette. Seo Flemming, W.

Silica Gel Corporation, methods and apparatus for catalysing gaseous reactions, (P.), B., 229.

manufacture of silica and other gels, (P.), B., 642. Silica Gel Corporation, Latshaw, M., and Judefind, W. L., preparation of catalytic gels, (P.), B., 642.

Silica Gel Corporation, and Miller, E. B., refrigeration apparatus,

(P.), B., 155.

Silica Gel Corporation, Miller, E. B., and Connolly, G. C., impregnated gel for adsorbing water vapour, (P.), B., 283.

removal of sulphur compounds from gas mixtures, (P.), B., 313. manufacture of adsorbent silica and other gels, (P.), B., 680, 813.

manufacture of hard, highly porous, adsorbent gels, (P.), B., 813.

Silica Gel Corporation. See also Miller, E. B., and Patrick, W. A. Silica Products Co. See Cross, R.

Silk, K., and Wood, N. D., comparative effects on an earthenware slip of varying soda-silica ratios in sodium silicate, B., 683.

Siller, A. Sco Heller, G. Silver Springs Bleaching & Dyeing Co., Ltd., and Hall,  $A.\ J.$ , production and colouring of textile yarns, fabrics, etc., (P.),

B., 243. mercerising textile materials containing both viscose and colluloso acotato silks, (P.), B., 640.

delustring of cellulose acctate silk, films, etc., (P.), B., 938. delustring of cellulose acetate silk materials and of other materials containing celluloso acetate, (P.), B., 938.

Silverman, A., effect of oxidising and reducing agents on selenium glass colours, B., 18.

Silverston, A. R., and Coke Reclamation Corporation, separation apparatus and process, (P.), B., 79. Silvette, H. See Chanutin, A., and Smith, H. W.

Silveus, E. See Thompson, W. O. Sim, J. See Weir, Ltd., G. & J. Simek, B. G., determination of small quantities of nitrate nitrogen, A., 42.

chemistry of the naturally occurring humic acids, B., 82. Simenauer, E., determination of hydrogen-ion concentration in

surgery, A., 1255.

Šimer, F. See Dickens, F.
Simici, D., and Popesco, M., blood-bilirubin in catarrhal and salvarsan ictorus, A., 841.

Simmonds, A. E., Simmonds, J. H., Todd, J. H., and Reunert &

Lenz, Ltd., fillings for cooling towers, (P.), B., 800.
Simmonds, J. H. See Simmonds, A. E.
Simmonds, N. See McCollum, E. V.
Simmons, C. W. See Ullmann, H. M.
Simmons, H. E. See Cummings, A. D., and Spear, E. B.

Simms, F. R., and Joy, B. C., device for extracting impurities from lubricating oils, (P.), B., 199. means for [magnetically] cleansing or filtering lubricating oils,

(P.), B., 387.

Simms, H. S., prearginine in edestin and its resistance to hydrolysis, A., 107.

chemical antagonism of ions. I. Effect of sodium-magnesium and potassium-magnesium mixtures on the activity of the oxalio ion, C<sub>2</sub>O<sub>4</sub>. II. Antagonism between anions and also between cations and anions in their effect on oxalate activity, A., 140.

chemical antagonism of ions. III. Effect of salt mixtures on gelatin activity, A., 647.

effect of salts on weak electrolytes. III. Interaction of certain

weak electrolytes, A., 765. chemical antagonism of ions. IV. Effect of salt mixtures on glycine activity, A., 1011.

Simms, H. S. See also Northrop, J. H.

Simon, A., constitution and stable end-state of hydrogels, A., 27. constitution of sodium plumbate, A., 158.

Simon, A., and Feher, F., measurement of small pressures with

an external indicator, A., 672.

Simon, A., and Glauner, R., complex-chemical behaviour of lithium. I. System lithium halide-mono-, di-, and tri-methylamine, A., 431.

Simon, A., and Weiner, P., effect of insulin and thyroxine on autolysis in liver, A., 725.

Simon, F., solid helium at high temperatures, A., 636.

fusion curve of helium, A., 1372.

Simon, F., and Glatzel, G., m. p.-pressure curves, A., 386. Simon, F., Ruhemann, M., and Edwards, W. A. M., fusion curve of helium. I., A., 497.

Simon, F., and Vohsen, E., crystal structure of strontium, A., 1221.

Simon, F. See also Hettner, G., and Ruhemann, M.

Simon, F. R. See Simon, W. G.

Simon, I., f. p. of organic compounds. XI. Compounds with 5 and 6 carbon atoms, A., 478.

pharmacological action of stabilised colloidal lead, A., 1337. Simon, K., preparation of humus extracts with neutral agents,

Simon, M. See Grasselli Dyestuff Corporation.

Simon, R. H., Jena glass filtering crucibles, B., 625. Simon, W. G., and Simon, F. R., drying, heating, or cooling machines, (P.), B., 838.

Simon & Co., colouring of non-rusting steel rifle hammers, (P.), B., 214.

Simon, Ltd., H., and Denham, H.J., purification of cereal products [from dust and light particles], (P.), B., 110.
Simon-Carves, Ltd., and Brown, J. H., coke ovens, (P.), B., 8.

Simon-Carves, Ltd., and Société Anonyme pour l'Utilisation des Combustibles, combined drying and pulverising apparatus, (P.), B., 268.

Simonds, F. M., furnace for treating ores, (P.), B., 176. Simonds, H. R., and Simonds-Dayton Co., A. A., manufacture of [ceramic] abrasive wheel, (P.), B., 1016.

Simonds, J. P. See Brandes, W. W.

Simonds-Dayton Co., A. A. See Simonds, H. R.

Simonet, M. See Colin, H.

Simonik, F., vitamin-C content of legumes during germination, A., 1344.

Simonnet, H. See Fabre, R.

Simons, A. See Kisch, B. Simons, V. D. See Woodhead, R.

Simons, W. E., A.I.B. sinter plant [for iron ores] at Messrs.
Guest, Keen, & Nettlefolds, Ltd., Cardiff works, B., 435.
Simons, W. R. See Hultman, E. W.

Simonsen, D. G. Sec Kendall, E. C.

Simonsen, J. L. See Gibson, C. S., Hariharan, K. V., and Menon,

Simonson, W. H., and Mantius, O., concentration of sulphuric acid, (P.), B., 896.
Simose, R. See Yabuta, T.
Simpkin, N. See Macpherson, H.

Simplex Refining Co. See Pyzel, D.

Simpson, C. E., [manufacture of] imitation suede leather [by coating fabric with cellulose acetate, etc.], (P.), B., 335. manufacture of imitation doe-skin [from rubber-coated fabrics],

(P.), B., 486.

See Hamilton, C. S.

Simpson, C. L. Simpson, G. S. See Crossley, M. L.

Simpson, I. A. See Heilbron, I. M.

Simpson, J., and Standard Oil Development Co., preparing hydrocarbon products, (P.), B., 770.

Simpson, J. T., mixing machine, (P.), B., 580.

Simpson, M. M. See Rushton, A. L.

Sims, C. E. See Hamilton, W. C.

Šimunek, R. See Heyrovský, J.

Sinclair, R. G., rôle of phospholipins of intestinal mucosa in fat absorption; phospholipins of liver and muscle, A., 719. Sinclair, W. B. See Gortner, R. A.

Sinclair Oil & Gas Co. See Bernard, H. B.

Sinclair Refining Co., and Herthel, E. C., cracking of hydrocarbon oils, (P.), B., 933.

Sinclair Refining Co. See also Bell, J. E., Herthel, E. C., Isom, E. W., Miller, A. E., Pelzer, H. L., Perl, J., Phillips, E. B., and Taber, G. H., jun.

Sindall, R. A., cooking retorts, (P.), B., 492.

Sindl, O., production of twisted artificial silk threads, etc., (P.), B., 280.

Singer, F., prevention of ageing in ceramic materials, (P.), B., 172.

white stoneware and other white ceramic masses, B., 283. Singer, K., chemistry of brain. III. Phosphatides of the brain, solublo in light petroleum, in progressive paralysis and marasmus, A., 90.

Singer, K., and Deutschberger, O., chemistry of brain. II. Phosphatides of the normal human brain soluble in light petroleum, A., 90.

Singer, K., and Pöppelmann, O., tissue respiration. V. Utilisation of protein in tissue respiration, A., 465.

Singh, B. See Bhatnagar, S. S. Singleton, W. See Gen. Electric Co., Ltd.

Singmaster, J. A., manufacture of artificial silk filaments, (P.), B., 848.

Singrun, A. See Audiffren, M.

Sinnatt, F. S., some properties of coal dust and pulverised coal, B., 763.

Sinnatt, F. S. See also Jenkins, S. H., Jones, J. H., and Lander, C. H.

Sinosaki, H., and Hara, R., hydrocyanic acid. II., A., 992. Sinozaki, M. Seo Nishizawa, K.

Sippel, O. A., food products [from honey], (P.), B., 795.

Sircar, A. C., and Guha-Ray, N. C., dyes derived from aconaphthenequinone; acenaphthiminazoles and acenaphthoxazoles, A., 579.

Sircar, S. C., electric moments of methyl chloride, ethyl chloride, and chloroform, A., 243.

Kerr effect in viscous liquids due to radio-frequency oscillating field, A., 743. Sircar, S. S. G., substituted butyrolactams, A., 52.

Sirk, H., relationship between surface tension and heat of vaporisation, A. 128.

Sirois, G., determination of arsenic in antimony oxide pigment, B., 609.

Sisley, J. P. See Wahl, A. Sisley, P., and David, M., determination of nitrogen in dyes and their intermediate products by the Kjeldahl method, B., 510. Sitz, G. See Metallbank & Metallurgische Ges. A .- G.

Sivadjian, J., detection of carbon tetrachloride in chloroform, B., 622

Sivan, M. R. R., and Raju, M. S., determination of nitrogen, A., 205.

Sivò, R., normal bilirubin content in human sera, A., 713.

Sivolobov, A. V., flow meter for gases, A., 1162. Sizoo, G. J., relationship between grain size and magnetic properties in pure iron, A., 245.

connexion between size of crystal nucleus and magnetic properties of pure nickel, A., 633.

magnetisation diagram of single iron crystals, A., 1133 magnetisation diagram of single nickel crystals, A., 1133. effective and reversible permeability, A., 1369.

Sizoo, G.J., and Zwikker, C., system nickel-iron, B., 752. Sjögren, B. See Svedberg, T.

Sjollema, B., and Emmerie, A., separation and determination of constituents of blood by means of selective adsorption, A., 461. Skaliks, W. See Eitel, W.

Skanavi-Grigorieva, M.S., high mobility of hydrogen and hydroxyl ions in aqueous solutions, A., 401.

Skarzyński, B. See Marchlewski, L.

Skau, E. L., centrifugal filtration device for purification of small amounts of material by recrystallisation, A., 903.

Skaupy, F. See Gen. Electric Co.

Skeen, J. R., reactions of seedlings to weak concentrations of hydrochloric acid and calcium, B., 143.

tolerance limit of seedlings for aluminium and iron and the antagonism of calcium, B., 259.

Skelton, G. G. See Bouda, B. Skertchly, W. P., and Celanese Corporation of America, purification of acetic anhydride, (P.), B., 123\*

Skinner, A. F. See Irvine, (Sir)J. C. Skinner, C. E., use of dextrin in the isolation or identification of

Azotobacter chroococcum, B., 410.

Skinner, D. G., and Graham, J. I., hydrogenation and liquefaction of coal. V. Influence of composition, pressure, temperature,

and catalysts on hydrogenation, B., 81. Skinner, D. G. See also Graham, J. 1. Skinner, H. W. B. See Lees, J. H.

Skinner, J. T., and Peterson, W. H., iron and manganese content of foodstuffs, B., 35. Skinner, L. M. See Skinner Manuf. Co.

Skinner Manufacturing Co., Skinner, L. M., and Heid, J. L., manufacture of cheese products, (P.), B., 536.

Skirrow, F. W. See Canadian Electro Products Co., Ltd., and Matheson, H. W.

Skita, A., and Keil, F., formation of tertiary amines in the reduction of nitriles and carbonyl compounds in basic solution, A., 1436.

Skita, A., and Keil, F. [with Boente, L.], formation of bases from carbonyl compounds. III. Synthesis of dl-ephedrine and other amino-alcohols, A., 808, 1066\*.

Skobelzyn, D., angular distribution of Compton recoil electrons,

A., 369. new fast  $\beta$ -radiation, A., 737.

Skobelzyn, D. See also Auger, P.

Sköldberg, H., apparatus [press] for expressing liquid from solid materials [e.g., peat], (P.), B., 509.

Skrabal, A., reaction velocity, concentration, and activity, A.,

Skrabal, A., and Rückert, M., velocity of hydrolysis of methyl mono- and di-chloroacetates, A., 149.

Skrabal, A., and Zahorka, A., water hydrolysis of ethyl acetate, A., 1396.

Škramovský, S. See Štěrba-Böhm, J.

Skraup, S., and Binder, O., superheating of uniform organic compounds. V. Aryl naphthenates and the mechanism of their transformations, A., 809.

Skujin, E. Scc Bauer, E. Slack, A. S. Scc Du Pont de Nemours & Co., E. I.

Slack, F. G., polarisation of light from canal rays, A., 1357. Slade, R. E., and Imperial Chemical Industries, Ltd., manufacture of fertilisers, (P.), B., 298.

production of ethyl alcohol, (P.), B., 426.

production of pure ammonium sulphate, (P.), B., 516.

Sladek, I. Sec Sörensen, S. P. L.

Slager, W. A. Sec N.V. Kodowa Refrigerator Co. Slagle, E. A. Sec O'Harra, B. M.

Slanetz,  $C.\ A.$  See McAlpine,  $J.\ G.$  Slanetz,  $C.\ F.$ , and Rettger,  $L.\ F.$ , bacterial metabolism; influence of phosphate buffer in carbohydrate-free and in dextroseconfaining media, A., 101.

Slaschtschev, A., extraction of castor oil with benzine, B., 528. petroleum and alcohol as solvents for castor oil, B., 528. benzine and alcohol as solvents for castor oil, B., 784.

Slater, E. O., protection of underground pipe from corrosion; method used in Southern California, B., 174.

Slater, L., comparison of methods for testing the caking properties of coal, B., 1002.

Slater, L. See also Evans, M. M.
Slater, R. H. See Kermack, W. O.
Slater, V. W. See Laporte, Ltd., B.
Slater, W. F., and Kirkham, Hulett, & Chandler, Ltd., gas and liquid contact apparatus; sprayer for effecting intimate contact between liquids and gases, (P.), B., 343\*.

Slater & Co. (Engineers), Ltd., J., and Robinson, J. C., water

sterilisers, (P.), B., 76.

Slattery, (Miss) M. K., fluorescence and solid solution, A., 10.

Slattery, (Miss) M. K. See also Wick, (Miss) F. G.

Slawinski, A., electrical method of measuring the concentration of

suspensions, A., 1142.

Slawson, C. B., hydrophilite, A., 1264.

Sleeman, J., method and apparatus for use in preparation of malted foodstuffs, (P.), B., 795.
Sleeper, F. H. See Walker, B. S.

Slegel, P. J., hydrometer method for determining colloid content [of clays], B., 129.

Slik, M. van der, and Vermeulen, J., modified determination of total geraniol content in citronclla oil, B., 958.

Slipher, V. M., and Sommer, L. A., explanation of the spectrum of the aurora, A., 1354.

Sloan, C. K. See Bartell, F. E. Sloan, L. W. Sce Palmer, W. W.

Sloan, W. A. See Oldright, G. L.

Sloat, C. A. Sec Menzies, A. W. C.

Sloman, H. A., production of pure beryllium oxide from beryllium ores, B., 1043.

Sloman, H. A., and Vivian, A. C., manufacture of beryllium oxide, (P.), B., 597.

Slonim, C., and Hüttig, G. F. [with Maier, O.], lithium. VII. Specific heats, heats of formation, decomposition, pressures, and densities of lithium halide hydrates, A., 990.

Slonim, C. See also Hüttig, G. F.

Slooff, M. See Böeseken, J

Slotta, K. H., and Jacobi, K. R., organic mercury bases and their salts, A., 304.

preparation of organic reagents in the analytical laboratory.

I. Diphenylcarbazide and diphenylcarbazone, A., 1061. Slotta, K. H., and Tschesche, R., carbimides. VI. Condensations

of methylcarbimide with cyanamide under the influence of triethylphosphine, A., 302.

diguanides. I. Constitution of the complex compounds of diguanide with heavy metals. II. Depressing action of diguanides on blood-sugar, A., 919.

Small, L. F. See Wieland, H. Small, W. R., [apparatus for] combustion of [small] fuel, (P.), B., 707.

Smalley, E. L. See Hevi Duty Electric Co.

Smallwood, A., and Fallon, J., furnaces, (P.), B., 625. [low-temperature] carbonisation of coal, (P.), B., 968.

Smallwood, H. M., rate of recombination of atomic hydrogen, A., 1016.

Smekal, A., crystal properties and conditions of crystallisation, A., 871.

dependence of ionic conductivity in crystals of salts on field strength, A., 1135.

mechanism of ionic conduction in solid compounds [of the class of] "good conductors," A., 1146.

defects in crystal structure and heterogeneous catalysis involving active centres, A., 1370.

Smekal, A. See also Quittner. F

Smetana, O., analysis of motor fuels, B., 967.

Smetkin, A., and Jakimov, P., manufacture of an improved tannin extract from badan by the Smetkin-Jakimov method, B., 105. Smetkin, A., and Pissarenko, A., tanning leather with badan

extract, B., 105.

Smialowski, M., synthesis of aniline, A., 1289. Smidth, L. See Budd Manuf. Co., E. G.

Smidth & Co., F. L. See Fasting, J. S., Lindhead, P. T., Nielsen, N., and Pontoppidan, C.

Smiles, S. Sec Cohen, A., Price, W. B., and Roberts, K. C.

Smirnov, P. See Kulikov, V.

Smirnov, P. S., determination of olefines, B., 463. Smirnova, M. I. See Ivanov, N. N.

Smit, W. C. See Böeseken, J.

Smith, A. See Morris Motors (1926), Ltd. Smith, A. B., and Smith, C. R., apparatus for mixing materials, (P.), B., 2.

Smith, A. E. See Brit. Thomson-Houston Co., Ltd. Smith, A. R. See Brit. Thomson-Houston Co., Ltd.

Smith, A. W., and Dillinger, J., effect of tension and a longitudinal magnetic field on the thermo-electromotive forces in permalloy, A., 495.

Smith, B. S. See Desch, C. H.

Smith, C. C., and Imperial Chemical Industries, Ltd., production of granular fertilisers, (P.), B., 448. production of nitric acid, (P.), B., 556.

production of materials [e.g., fertilisers] in granular form, (P.), B., 680. Smith, C. C.

See also Mitchell, A. E.

Smith, C. E. See Hand, C. N.

Smith, C. F. See Twyman, F

Smith, C. G. See Thorne, P. C. L.

Smith, Charles G., and Raytheon, Inc., gaseous conduction apparatus, (P.), B., 649.

See Hamilton, E. H.

Smith, C. M. See Hamilton, E. Smith, C. R. See Smith, A. B.

Smith, D. F., and Branting, B. F., equilibrium between methyl alcohol, carbon monoxide, and hydrogen, A., 265.

Smith, D. F., Hawk, C. O., and Reynolds, D. A., synthesis of higher hydrocarbons from water-gas [at atmospheric pressure]. II., B., 82.

Smith, D. F.See also Griffin, H.K.

Smith, D. M. See Stewart, T. D.

Smith, E. A., properties of industrial gold alloys, B., 944. Smith, E. A. C. See Guggenheim, D.

Smith, E. C., formation of lactic acid in the muscles in the frozen state, A., 1102.

Smith, E. H. See Berry, H. R.

Smith, E. L., determination of unsaponifiable matter in oils and fats, B., 102.

Smith, E. L. See also Bacharach, A. L.

Smith, E. R., potential differences across the boundaries between solutions of mixed univalent chlorides, A., 1015.

Smith, E. R. See also Washburn, E. W.

Smith, E. W., comparative costs of gas production in the retort house, B., 117.
Smith, E. W. See also Tomlinsons (Rochdale), Ltd.

Smith, F., and American Machine & Foundry Co., [metallically] coating metal, (P.), B., 604.

Smith, Francis A., and Pickering, S. F., Bunsen flames of unusual structure, B., 744\*.

Smith, Franklin A. See Hess, K.

Smith, F. C., ultra-violet absorption spectra of uric acid and of the ultra-filtrate of serum, A., 89.

ultra-violet absorption spectra of certain aromatic aminoacids, and of the serum-proteins, A., 431.

Smith, F. D. See Blicke, F. F. Smith, F. E., Desborough, A. P. H., Thomson, W. T., Ledbury, W., and Blair, E. W., manufacture of nitroglycerin and the like, (P.), B., 113. Smith, F. E., Desborough, A. P. H., Thomson, W. T., Reynolds,

H. F., and Blair, E. W., mixing of liquids, (P.), B., 80.

Smith, F. F. P. See Norrish, R. G. W. Smith, G. B. L., monoarylguanidines. I. α-Phenylguanidine, A., 436.

Smith, G. B. L., Kane, J. H., and Mason, C. W., monoarylguanidines. II. Benzoxazolylguanidino, A., 1186.

Smith, George Frederick, use of barium perchlorate as a drying agent and ammonia absorbent, A., 1026. rapid dehydration of alcohol using barium oxide and metallic

calcium, B., 449.

Smith, George Frederick, Hardy, L. V., and Gard, E. L., segregation of analysed samples, A., 1409. Smith, Gilbert F. See Lowry, T. M.

Smith, G. G., system and apparatus for sewage [disposal], (P.), B., 152.

Smith, G. M., and Breckenridge, J. M., cathode potentials and electrode efficiencies of copper in copper cyanide-sodium cyanide solutions, A., 1241.

Smith, G. W. See Hall, R. E. Smith, H. A. See Clark, G. L., and Hyatt, J. M.

Smith, H. B., waste heat in cement mills and paper mills, B., 980.

Smith, H. D. See Patten, C. G., and Shrum, G. M. Smith, H. F., and Gas Research Co., gas-producing apparatus, (P.), B., 385.

gas producer, (P.), B., 842. Smith, H. G., Bridger, C. J., and Imperial Chemical Industries,

Ltd., production of ethyl alcohol, (P.), B., 426.

Smith, H. G., Franklin, R. G., and Imperial Chemical Industries,
Ltd., manufacture of catalysts for production of methyl and higher alcohols, (P.), B., 814.
Smith, H. G., and Imperial Chemical Industries, Ltd., production

of esters from acid amides, (P.), B., 671.

Smith, H. H. See Collinson, D. L. Smith, H. L. See Duffendack, O. S

Smith, (Miss) H. M. See Todd, J. P.

Smith, H. P., Groth, A. H., and Whipple, G. H., bile salt metabolism.
I. Control diets, methods, and fasting output, A., 212.
Smith, H. P., and Whipple, G. H., bile salt metabolism. II. Influence of foodstuffs. III. Influence of tryptophan, tyrosine, and related substances. IV. How much bile salt circulates in the body? A., 212.

Smith, H. W., exerction of ammonia and carbamide by the gills of fish, A., 594.

composition of the body fluids of the goosefish (Lophius pis-

catorius), A., 716. Smith, H. W. [with Baker, J. T., and Silvette, H.], body fluids of elasmobranchs, A., 463.

Smith, H. W. [with Silvette, H.], inorganic composition of body fluids of the Chelonia, A., 953.

Smith, I. B., and Leeds & Northrup Co., [electric] furnace, (P.), B., 823.

Smith, J. A. B. See Hirst, E. L.

Smith, J. B., distribution of nitrate in three layers of fallow soil,

Smith, J. B.See also Hartwell, B. L. Smith, J. C. Soo Matheson, H. W. Smith, J. E. See Dawson, H. M.

Smith, J. F. See Kermack, W. O.

Smith, J. H., Connor, C. A., and Armstrong, F. H., correlation of fatigue and overstress [in steel], B., 818.

Smith, J. Hunter. See Gardner, H. W. Smith, J. K. See Climax Molybdenum Co.

Smith, J. W., apparent influence of an electric field on the b. p. of benzene, A., 635.

intensively dried liquids, A., 1226.

Smith, K. K., and O'Bryan, H. M., comparison of the Corbino and Hall effects in silver and brass, A., 247.

Smith, K. O. See Carman, A. P.

Smith, L. [with Persson, A.], hydrolysis of tin chlorido and the chlorostannates, A., 29.

Smith, L. E. See La Forge, F. B.

Smith, L. I., and Lux, A. R., polymethylbenzenes. I. Jacobsen reaction with pentamethylbenzene, and preparation of prehnitene [1:2:3:4-tetramethylbenzene], A., 1433.

Smith, L. I., and MacDougall, F. H., polymethylbenzenes. II. M. p. of tetra-, penta-, and hexa-methylbenzenes, and f.-p. diagram of mixtures of durene [1:2:4:5-tetramethylbenzene] and isodurene [1:2:3:5-tetramethylbenzene], A., 1433.

Smith, M., treatment of wood and like porous material, (P.),

B., 248\*.

Smith, M. E. See Sure, B. Smith, M. L. See Jones, W. N.

Smith, N. C., composition of Californian creams, B., 146.

Smith, N. C. See also Hoyt, C. F.

Smith, O. H., and Naugatuck Chemical Co., production of styrene

from chlorocthylbonzene, (P.), B., 511.

Smith, R. B., and Christiansen, W. G., silver-ion concentration of colloidal silver germicides. III. Titration of soluble iodides in colloidal silver iodide, B., 909.

Smith, R. B. See also Keelan, H. S. Smith, Ralph G., determination of cyanide in small amounts, A.,

686.

Smith, Roger Green, treatment of paper pulp, (P.), B., 750. Smith, R. S. See Winters, E., jun.

Smith, S., some multiplets of doubly-ionised lead, A., 113. some multiplets of singly-ionised thallium, A., 227.

wave-length measurements in the vacuum spark spectrum of lead from 2200 to 5000 A., A., 366.

anomalous terms in the spectrum of doubly-ionised lead, A.,

second spark spectrum of lead, Pb III, A., 1119.

Smith, S. B. See Hill, A. E. Smith, S. C., wet treatment of subdivided materials involving filtration or screening, (P.), B., 3. wet treatment of lead-bearing materials involving filtration,

(P.), B., 59.

treatment of ores, etc. containing platinum, (P.), B., 361. treatment of nickeliferous material [South African coppernickel-platinum concentrates], (P.), B., 562.

electrolytic recovery of metals [nickel], (P.), B., 725. heating and chemical treatment of liquids and molten materials by direct contact with combustion products, (P.), B., 965\*.

Smith, S. W. J., Dee, A. A., and Young, J., mode of formation of Neumann bands. I. Mechanism of twinning in the body-centred cubic lattice. II. Evidence that the bands are twins. III. Movement from which the twinning results, A., 124.

Smith, T., photography and the wave-theory of light; clash between ray and wave theories of image formation, B., 959. Smith, Wilfred, volumetric determination of phosphoric acid,

A., 1159. Smith, William, Thomas, J., and Scottish Dyes, Ltd., preparation

of flavanthrone, (P.), B., 551\* manufacture of [vat] dyes and intermediates [of the anthraquinone series], (P.), B., 591.

Smith, W. A. See Pneumatic Conveyance & Extraction, Ltd. Smith, W. H., reduction of ore and conversion of hydrocarbons,

(P.), B., 398. Smith, W. H., and General Reduction Corporation, reduction of

metallic oxides, (P.), B., 61' Smith, W. O., and Foote, P. D., capillary phenomena in non-circular cylindrical tubes, A., 1001.
Smith, W. S., and Garnett, H. J., manufacture of wires and tapes

for loading telephone conductors, (P.), B., 822.

Smith, W. S., Garnett, H. J., and Channon, H. C., electrical insulating material, (P.), B., 400.

Smith, W. S., Garnett, H. J., Dean, J. N., Habgood, B. J., and

Channon, H. C., electrical insulating materials, (P.), B., 1024.

Smith, W. S., Garnett, H. J., and Holden, J. A., iron alloys, (P.), B., 23.

magnetic alloys, (P.), B., 134.

heat-treatment of metals and alloys, (P.), B., 216\*.

[iron-nickel-chromium] alloys, (P.), B., 524. refinement of nickel alloys, (P.), B., 526\*.

[magnetic alloys for] loaded conductor, (P.), B., 526\*.

magnetic [iron] alloy, (P.), B., 900\*. Smith & Blyth, Ltd., S. See MacCallum, A. E. G. Smith Corporation, A. O., still for use in oil refining, and method of

making same by electric are welding, (P.), B., 385, 547.

Smith Engineering Works. See Rumpel, H. H.

Smithells, C.J., and Williams, S.V., m. p. of chromium, A., 1226. Smithells, C.J. See also Gen. Electric Co.

Smits, A., adsorption of vapour on a quartz or glass wall, A., 25. allotropic modifications of phosphorus, A., 127, 253.

pseudo-components of hydrogen, A., 982.

Smits, A., and De Lange, W., determination of the pressure and density of moist, saturated ammonium chloride vapour, A., 128.

Smits, A, and Gerding, H, photo-olectric effect with aluminium and its amalgams, A., 736.

Smits, A., and MacGillavry, (Miss) C. H., [radio]activity of lead obtained from the roof of Paris Observatory, A., 1125.

Smits, A., and Purcell, R., determination of the pressure and density of moist, saturated ammonium bromide vapour, A., 128.

Smits, A. See also Purcell, R.

Smoked Products Co., production of food preservatives, food adjuncts, condiments, etc., (P.), B., 659.

Smolyaninova, E. See Shorigin, P.

Smoot, C. H. See Smoot Engineering Corporation.

Smoot Engineering Corporation, and Smoot, C. H., regulating combustion in [boiler] furnaces, (P.), B., 343.

regulating the density of mixed gases, (P.), B., 628.

Smorodincev, J. A., effect of substances of the quinine group on the enzymic functions of the organism. X. Influence of quinine on the dynamics of protein exchange and on exidereduction processes, A., 97.

Smorodinoev, J. A., and Adova, A. N., occurrence of methyl-

guanidine in animal organisms. I. Detection of methyl-

guanidine in dog's muscle, A., 342.

influence of calcium on the fauna of peaty waters, A., 351.

occurrence of methylguanidine in animal organisms. II. Separation of methylguanidine from earnosine and creatinine, A., 589.

relationship between chemical properties of a series of pepsin preparations and their activity towards different proteins, A., 723.

occurrence of methylguanidine in animal organisms. Use of benzenesulphonyl chloride for separation of methyl-

guanidine, A., 839.

Smorodincev, J. A., Adova, A. N., and Pikoul, I. N., effect of substances of the quinine group on the enzymic functions of the organism. XII. Effect of quinine on the secretion of the gastric juice in man, A., 1480.

Smorodincev, J. A., Adova, A. N., and Tschulkova, S. S., determination of carboxyl groups in digestion products of proteins,

A., 1188.

Smorodincev, J. A., and Iljin, E. A., influence of arsenic and antimony compounds on enzymic functions of the organism. V. Cause of inhibitory influence of arsenites and arsenates on salivary amylase, A., 97.

Smorodincev, J. A., and Sveschnikova, E. A., effect of substances of the quinine group on the enzymic functions of the organism. XI. Comparison of the influence of potassium, sodium, and quinino chlorides on the peptic digestion of protein, A., 848.

Smorodincev, J. A. Sce also Adova, A. N. Smyth, C. P., dielectric polarisation of liquids. V. Atomic polarisation, A., 980.

some applications of electric moments to electronic theories of valency, A., 1128.

Smyth, C. P., and Engel, E. W., molecular orientation and the partial vapour pressures of binary mixtures. I. Systems composed of normal liquids. II. Systems containing an alcohol, A., 1374.

Smyth, C. P., Engel, E. W., and Wilson, E. B., jun., dielectric polarisation of liquids. IV. Dependence of molar refraction on concentration in mixtures, A., 994.

Smyth, F. S. Seo Hartmann, A. F.

Smyth, H. D., and Stuckelberg, E. C. G., ionisation by collisions of the second kind in mixtures of oxygen with the rare gases, A., 113.

Smyth, H. D. See also Condon, E. U.

Smythe, C. V., and Miller, R. C., iron content of the albino rat at different stages of the life cycle, A., 1098. Smythe, C. V. See also Cox, G. J.

Snajdman, L. O., unknown losses of sugar during saturation, B., 412.

Snapper, I., and Grünbaum, A., decomposition of acetoacetic and β-hydroxybutyric acids in muscle, A., 94.

lactic acid excretion in urine and sweat during football, A., 598. lactic acid metabolism in athletics, A., 718.

lactic acid excretion in urine and sweat in various sports, A., 844. elimination of lactic acid in athletics, A., 1332.

Snapper, I., Grünbaum, A., and Mendes de Leon, C., decomposition of acetoacetic acid and  $\beta$ -hydroxybutyric acid in the organs of the phloridzinised dog, A., 94.

Snead & Co. See MacDonald, A. S.

Snell, F. D., chemical treatment of [wool] trade waste, B., 380.

Snell, J. F. See Fowler, D. E. Snell, L. W., recovery of products from [distillation of hydrocarbons in fractionating condensers, (P.), B., 843

Snelling, W.O., manufacture of hollow rayon [artificial silk] fibres, (P.), B., 639.

furfuraldehyde reaction product [porous charcoal], (P.), B., 887. Snelling, W. O., and Trojan Powder Co., explosive for signalling, (P.), B., 662.

Snelling, W.O. See also Rinkenbach, W.H.

Snia-Viscosa, driving means for mixing or similar apparatus for liquids, (P.), B., 702.

Snoddy, A.O. Sco Bosart, L. W.

Snock, A., purification of the sewage of Elmshorn (Holstein) with special reference to effluents from leather works, B., 152.

Snow, C. P., relation between Raman lines and infra-red bands, A., 1216.

Snow, C. P., Rawlins, F. I. G., and Rideal, E. K., infra-red investigations of molecular structure. II. Molecule of nitric oxide,

A., 865. Snow, C. P., and Rideal, E. K., infra-red investigations of molecular structure. III. Molecule of carbon monoxide, A., 1363. Snow, C. P., and Taylor, A. M., infra-red investigations of mole-

cular structure. I. Apparatus and technique, A., 865.

Snow, C. S. H., emulsifiers, mixers, etc., (P.), B., 459. Snow, O. W. See Joseph, A. F.

Snyder, C. G., determination of sulphur in metallic antimony, B., 603.

Snyder, E. F. See Holmes, W. C.

Snyder, E. H., Green, W. D., and Combined Metals Reduction Co., concentration of ores, (P.), B., 59.

Snyder, J. K., and Horn Co., A. C., production of printing surfaces of wood and products thereof, (P.), B., 677.

Snyder, R. H., Stark effect for the diffuse lines of silver and lithium, A., 480.

Snyder,  $R.\ M.$  See Trevethick, A. Snyder,  $R.\ W.$  See Goodyear Tire & Rubber Co.

Snyder, S., and Sprout, Waldron & Co., mixing machine, (P.), B., 838. Soborovski, L. Z. See Scharvin, V. V

Sobotka, H., existence of the p-indole ring, A., 1311. Sobotka, H. See also Willstätter, R.

Società Italiana per le Ind. Minerarie e Chimiche, treatment of metallic oxides or other compounds with hydrocarbons, (P.), B., 813.

Società Italiana Pirelli, and Pestalozza, U., treatment of rubber, (P.), B., 612.

Società Italiana Pirelli. See also Pestalozza, U.

Società Italiana Polveri Esplodenti, manufacture of explosive projectile fuses, (P.), B., 912.

Société Alumine & Dérlvés. See Patrouilleau, L.G. Société Ammonia. See Jaubert, G.F.

Société Anonyme des Aciéries et Forges de Firminy, protection of metals in the cementation process, (P.), B., 61.
Société Anonyme "l'Air Chaud." See Philipon, H. J. F.

Société Anonyme des Appareils de Manutention et Fours Stein, continuous production of water-gas, (P.), B., 233.

Société Anonyme Assoc. Parislenne pour l'Industrie Chimique, Desparmet, E., Weil, R., and Schmitt, F., manufacture of esters of aliphatic, aromatic, and alicyclic alcohols and fatty acids by the action of alcohols on oils or fats or on glyceryl esters of fatty acids, (P.), B., 254.

Société Anonyme le Carbone, [gas] accumulator, (P.), B., 25. Société Anonyme le Carbone. See also Portail, F. C. F.

Société Anonyme des Charbons Actifs, E. Urbain, separation of mixtures of liquids, or of liquids and solids, or of liquids and gases, (P.), B., 544.

manufacture of activated charcoal, (P.), B., 1005.

Société Anonyme des Chaux et Ciments de Lafarge et du Teil. See Dumas, G.

Société Anonyme J. Cockerill. See Cousin, A, J, F, G.

Société Anonyme de Commentry, Fourchambault & Decazeville, drying chambers with heating floor, (P.), B., 701.

Société Anonyme Compagnie de Produits Chimique & Electrométallurgiques Alais, Froges, & Camargue, and Hulin, P. L., electrolytic apparatus for refining aluminium, etc., (P.), B., 290.

Société Anonyme des Distilleries des Deux-Sèvres, separation in the anhydrous state of fatty acids contained in dilute aqueous solutions, (P.), B., 47.

manufacture of acetal, (P.), B., 315.

continuous manufacture of anhydrous acetic acid from its aqueous solutions, (P.), B., 349, 426.

simultaneous distillation, purifying, and dehydration of alcohol obtained from fermented mashes, (P.), B., 834.

Société Anonyme des Engrais et Noir Animal, absorptive carbon, (P.), B., 8.

active carbon, (P.), B., 8.

production of active charcoal, (P.), B., 505.

Société Anonyme des Établissements Delaunay Belleville, heatexchange apparatus, (P.), B., 305.

Société Anonyme des Établissements Neu, apparatus for removing dust from gases, (P.), B., 3.

Société Anonyme des Établissements A. Olier, automatic apparatus for the continuous production of extracts, particularly of sugar contained in sugar plants, (P.), B., 33.

Société Anonyme Établissements Poliet & Chausson. Sec Hendricks, J. A.

Société Anonyme des Fours à Coke Semet-Solvay & Piette, production of ammonium sulphate [from coal gas], (P.), B., 313.

Société Anonyme "Le Nickél," extracting nickel from its alloys, (P.), B., 214.

electrolytic extraction of metals [nickel], (P.), B., 858.

Société Anonyme Le Tank, factice; [rubber substitute], (P.), B., 256.

Société Anonyme des Matières Colorantes & Produits Chimiques de St. Denis, Lantz, R., and Wahl, A., manufacture of azine dyes, (P.), B., 712.

Société Anonyme des Matières Colorantes & Produits Chimiques de St. Denis. See also Wahl, A.

Société Anonyme Métallurgique de Sambre & Moselle, and Gesellschaft für Linde's Eismaschinen Akt.-Ges., recovery of bonzene and hydrocarbons from coke-oven gas, (P.), B., 45.

Société Anonyme Métallurgique de Sambre & Moselle. Sec also Ges, für Linde's Eismaschinen A.-G.

Société Anonyme M. Naef & Cie., preparation of monocyclic lactones with 14 to 18 ring members, (P.), B., 302.

Société Anonyme M. Naef & Cie., and Naef & Cie., M., preparation of the lactone of 14-oxy- [ω-hydroxy-] tetradecane-α-carboxylic acid, (P.), B., 235.

Société Anonyme d'Ougrée-Marihaye, treatment or purification of coal or other carbonaccous material, (P.), B., 7.

manufacture of coke and electrodes therefrom, chiefly for use in electrometallurgy, (P.), B., 8.

Société Anonyme des Procédés R. Audubert (S.A.P.R.A.), filtering devices, (P.), B., 1036.

Société Anonyme des Produits Chimiques de Clamecy, fractional distillation of pyroligneous acid, (P.), B., 233.

Société Anonyme Progil, manufacture of concentrated acetic acid, (P.), B., 199.

Société Anonyme Trefileries et Laminoirs du Havre, Anciens Établissements L. Weiller, Société Co-opérative de Rugles, et la Canalisation Electrique Réunis, electrolytic manufacture of metal powders, (P.); B., 215.

Société Anonyme pour l'Utilisation des Combustibles. See Simon Carves, Ltd.

Société des Brevets J. Paisseau, manufacture of decorative sheet material [of celluloid or cellulose acetate], (P.), B., 849.

Société le Carbone. See Oppenheim, R.

Proc. G. Claude.

Société du Carburateur Zénith. See Boulade, A. Société Chimique de la Grande Paroisse (Azote et Produits Chimiques). See L'Air Liquide Soc. Anon. pour l'Étude et l'Exploit, des

Société Chimique de la Seine, and Szidon, V., apparatus for electrolytically depositing chromium, (P.), B., 1020.

Société Chimique des Usines du Rhône, manufacture of powdered plastic material, (P.), B., 167.

manufacture of potassium manganate, (P.), B., 244.

protection of copper apparatus against corrosion by carboxylic acids, (P.), B., 250.

manufacture of [weighted] artificial silk, (P.), B., 596. production of copper arsenate, (P.), B., 681.

Société Chimique des Usines du Rhône. See also Soc. des Usines

Chim. Rhône-Poulenc.
Société Civile ponr l'Étude de la Photographie et de la Cinématographie en Couleurs, reproduction of images on photographie films bearing microscopic refractive elements, (P.). B., 227. printing or reproducing photographic films bearing colour

records, (P.), B., 539.

[recording and projection apparatus for] photography and kinematography in colours, (P.), B., 577.

films for colour photography and kinematography, (P.), B., 998.

Société Civile pour l'Étude de la Photographie et de la Cinématographie en Couleurs. See also Berthon, R., and Soc. Franç. Cinéchromatique.

Société Civile des Procédés Masse. See Masse, C.

Société Coloniale Anversoise Société Anonyme. See Taelen, J. C. van der.

Société E. & L. Constant. See Constant, E.

Société D. O., treatment of artificial silk, (P.), B., 750.

Société d'Électrochimique, d'Électrométallurgie, et des Aciéries Electrique d'Ugine, manufacture of chloral, (P.), B., 36. Société Électro-Métallurgique de Montricher, mounting of furnace

electrodes, (P.), B., 62. poking and stirring apparatus for electric furnaces, (P.), B., 689.

clectrodes for electric furnaces, (P.), B., 901.

Société Électro-Métallurgique de Montricher. See also Miguet, P. L. J.

Société des Établissements Barbet, apparatus for preliminary separation of crude benzolcs, (P.), B., 347.

Société des Établissements Barbet. Sec also Legendre, G. F. Société d'Étude des Verres et Glaces de Sûreté, manufacture of reinforced glass, (P.), B., 247.

compound transparent [glass] sheets, (P.), B., 323.

Société d'Études Chimique pour l'Industrie, purifying fused cements, (P.), B., 853.

Société d'Études Chimique pour l'Industrie. See also Breslauer, J. Société d'Études et d'Exploitation des Matières Organiques, and Syndicat d'Études des Matières Organiques, conversion of natural or artificial inflammable gases into unsaturated hydrocarbons, (P.), B., 424.

Société d'Exploitation de Brevets et Procédés P.N., manufacture of resin solutions, (P.), B., 333.

Société pour la Fabrication de la Soie "Rhodiaseta," manufacture of artificial threads and filaments by the dry-spinning method, (P.), B., 50.

treatment of threads or fabrics containing cellulose acetate silk, (P.), B., 126.

manufacture of artificial silk by the dry-spinning method, (P.), B., 168.

Société pour la Fabrication de la Soie "Rhodiaseta." Sec also Grillet, N. B., Lahousse, L. E. G., and Lardy, G.

Société Française des Charbonnages d'Along & Dong-Dang, agglomerated fuel, (P.), B., 232.

Société Française Cinéchromatique (Proc. R. Berthon), and Soc. Civile pour l'Étude de la Photographie et Cinématographie en Couleurs, selector screens for colour photography and kinematography, (P.), B., 998.

Société Française de Cinématographie et de Photographie Films en Couleurs Keller-Dorian, reproduction of original cinematograph colour record positive films having a support goffered in lenticular elements, (P.), B., 378.

Société Française des Lampes à Incandescence "Luxor," glowlamp filaments, (P.), B., 290.

Société Française des Produits Alimentaires Azotés Société Anonyme, extraction of oil from fish liver, (P.), B., 608.

Société Française des Produits Alimentaires Azotés Société Anonyme. See also Kahn, A.

Société Générale d'Évaporation Procédés Prache & Bouillon, centrifugal separators, (P.), B., 1000.

Société Générale Métallurgique de Hoboken, manufacture of sulphuric acid, (P.), B., 641. Société Industrielle de la Cellulose, recuperation of hydrochloric acid gas from aqueous hydrochloric acid; recovery of hydrochloric acid, (P.), B., 432.

clarification of cellulose hydrolysis products, (P.), B., 656. Société Industrielle des Dérivés du Soufre, decolorisation of sugar

juice by means of hyposulphites, B., 372.

Société Industrielle des Matières Plastiques. See Barthêlemy, II. Société Internationale des Combustibles Liquides, treatment of bituminous materials [from the berginisation of coal], (P.), B., 45.

Société Internationale des Combustibles Liquides, and Deutsche Bergin-Akt.-Ges. für Kohle- & Erdölchemie, production of

hydrogen from steam and carbon, (P.), B., 588.

Société Internationale des Procédés Prudhomme-Houdry, treatment of a metallic, organic, or other compound, or a gas, by a gaseous agent serving to enter into reaction therewith, (P.), B., 4.

Société Internationale des Procédés Prudhomme-Houdry. See also Comp. Internat. pour la Fabr. des Essences et Pétroles.

Société Internationale des Procédés Prudhomme (S.I.P.P.). See Prudhomme,  $E.\ A.$ 

Société Lap. See Seailles, J. C.

Société Lefrane & Cie., manufacture of butyric acid by fermentation, (P.), B., 146.

Société Lyonnaise de Soie Artificielle. See Cusln, M.

Société Minière et Métallurgique de Penarroya, working of iron ores, slags, and residues, containing lead, zinc, and silver, (P.), B., 249.

treatment of zinc ores, (P.), B., 1019.

Société Nantaise Electro-Chim. et Métallurgique, chromium plating [bath], (P.), B., 251.

Société Nouvelle de L'Orfèvrerie d'Ercuis, chromium plating of conducting bodies, (P.), B., 858.

Société de Photochimie "Elka," See De Procoudine-Gorsky, S. Société Provia, making bituminous emulsions and distributing same on road surfaces, (P.), B., 1017.

Société de Recherches et d'Exploitations Pétrolifères, separation of gases and vapours by means of solid adsorbents, (P.), B., 4.

activation of carbon by means of gases, (P.), B., 915.
Société de Recherches et d'Exploitations Pétrolifères. See also

Godel, A. Société de Recherches et de Perfectionnements Industriels, impregnation of wood, (P.), B., 209.

retort setting for heating fuel with gases or superheated steam, (P.), B., 340.

Société de Recherches et de Perfectionnements Industriels. Sce also Lévèque, P. H.

Société Rol Lister & Cie., manufacture of [bituminous] emulsions and emulsifiers for producing the same (P) B 314

and emulsifiers for producing the same, (P.), B., 314. Société Technique d'Optique et de Photographie (S.T.O.P.), production of monochrome images on photographic films, (P.), B., 151.

Société des Textiles Roannais, process for hydrophilising flax in the raw or retted state to obtain hydrophilous wadding therefrom, (P.), B., 279.

Société des Usines Chimiques Rhône-Poulenc, manufacture of potassium manganate, (P.), B., 432.

manufacture of decorative [compound] sheet [of cellulosic] material [by heat and pressure], (P.), B., 679.

Société des Usines Chimiques Rhône-Poulenc, Gault, H., and Bidaud, F., manufacture of ehloroacetic cellulose esters, (P.), B., 1011.

Société des Usines Chimiques Rhône-Poulenc. See also Altwegg, J. Société Veuve Bonnet Ainé & ses Fils, machines for treating skeins [with liquids], (P.), B., 679.

machines for treating skeins, (P.), B., 717.

Société Zihna, manufacture of tobaccos, (P.), B., 303.

Society of Chemical Industry in Basle, production of fast tints on vegetable fibres [dyeing cotton with azo-dyes containing chromium], (P.), B., 14.

extracts of the internal secretory organs of females, (P.), B., 150.

manufacture of stable diazo-compounds, (P.), B., 165.

manufacture of azo-dyes containing chromium and their application, (P.), B., 165.

manufacture of vat dyes [of the dibenzanthrone series], (P.), B., 165, 674.

manufacture of condensation products from formaldehyde and thiourea or a mixture of thiourea and urea, (P.), B., 219. manufacture of [sulphide] dyes, (P.), B., 238.

Society of Chemical Industry in Basle, manufacture of new [azo-direct] dyes, (P.), B., 317.

manufacture of [azo-] dyes, (P.), B., 317.

dye preparations [for acetate silk] and their application, (P.), B., 317.

manufacture of [acid azo-] dyes, (P.), B., 351, 890.

manufacture of coloured varnishes, (P.), B., 366.

manufacture of [aze-] dyes containing chromium, and their application, (P.), B., 388.

manufacture of artificial [resin] materials, (P.), B., 610.

improvement of animal or vegetable materials, (P.), B., 639. manufacture of new dyes [of the anthraquinone series for acetate silk; pigment dyes], (P.), B., 674.

manufacture of aminoanthraquinone derivatives [dyes for cellulose acetate], (P.), B., 710.

insoluble azo-dyes [ice colours and pigments], (P.), B., 711. manufacture of dye preparations [for acetate silk dyeing], (P.), B., 716.

production of sterols, (P.), B., 737.

manufacture of quaternary ammonium compounds, (P.), B., 807.

manufacture of aminoalkylarylearbinols or N-alkylamino-alkylarylearbinols, (P.), B., 807.

manufacture of derivatives of [indigoid] vat dyes and printing therewith, (P.), B., 808.

manufacture of unsaturated hydrocarbons, (P.), B., 844.

manufacture of vat dyes [of the dibenzanthrone series] and an intermediate product, (P.), B., 845.

manufacture of azo-dyes and application thereof [as varnish pigments], (P.), B., 846.

producing fast tints on ethers or esters of cellulose, (P.),

B., 849. production of highly active substances from male internal secretory organs, (P.), B., 871.

manufacture of [thioindigoid vat] dye preparations, (P.), B., 890.

manufacture of azo-dyes [ice colours and pigments], (P.), B., 890.

manufacture of [mordant acid] azo-dyes and the application thereof, (P.), B., 891.

manufacture of azo-dyes containing chromium, (P.), B., 891. manufacture of [mixed azo-] dyes containing metal, (P.), B., 891.

manufacture of [resinous basic] condensation products [from arylamines and acetylene], (P.), B., 903. manufacture of unilaterally acylated diamines of therapeutic

activity, (P.), B., 958.
obtaining and separating physiologically active substances from

male generative organs, (P.), B., 959. Society of Chemical Industry in Basle, Ackermann, F., and Schetelig,

Society of Chemical Industry in Basle, Ackermann, F., and Schetelig, P., condensation products [dyes] of the anthraquinone series, (P.), B., 712\*.

Society of Chemical Industry in Basle, and Andriessens, H., economical treatment of mixtures containing hydrocarbon and nitrogen in the electric arc, (P.), B., 507.

Society of Chemical Industry in Basle, Bots, H., and Catineau, A., manufacture of bluish sulphurised indophenol dyes, (P.), B., 124\*.

Society of Chemical Industry in Basle, Felix, F., and Allemann, O., manufacture of dyestuff preparation, (P.), B., 1009\*.

Society of Chemical Industry in Basle, Gams, A., and Locher, F., manufacture of sterols, (P.), B., 1032\*.

Society of Chemical Industry in Basle, Gams, A., and Widmer, G., manufacture of condensation products of urea and formaldehyde, (P.), B., 691\*.

Society of Chemical Industry in Basle, and Goeschke, A., dyeing of cellulose esters and ethers, (P.), B., 15\*.

Society of Chemical Industry in Basle, Mayer, B., and Siebenbürger, H., manufacture of [dibenzanthrone] vat dyes, (P.), B., 891\*.

Society of Chemical Industry in Basle, Mayer, B., and Würgler, J., manufacture of indigoid dyes, (P.), B., 428\*.

Society of Chemical Industry in Basic, and Merki, W., manufacture of physiologically-active substances from [secretory] organs [of females], (P.), B., 150\*.

Society of Chemical Industry in Basle, and Miescher, K., manufacture of basic derivatives of substituted quinolinecarboxylic acids [anæsthetics], (P.), B., 622.

Society of Chemical Industry in Basle, and Minnich, W., esters of cholesterol with unsaturated acids, (P.), B., 577\*.

Society of Chemical Industry in Basle, Reber, E., and Spieler, J., [manufacture of acid] monoazo-dyes, (P.), B., 974\*.

Society of Chemical Industry in Basle, and Straub, F., production of fast tints on vegetable fibre, (P.), B., 354\*.

Soderlund, O. See Testrup, N

Södermann, M., K-radiation of the lightest elements, A., 366. Söllner, K., electro-stenolysis and electrolytic membrane processes,

See also Frenndlich, H. Söllner, K.

Sörensen, S. P. L., composition and characteristics of the proteins, A., 204.

Sörensen, S. P. L., and Sladek, I., Wo. Ostwald's "solid-phase rule" and the solubility of casein in sodium hydroxide, A., 1142, 1230.

Soest, L. L. W. van. See Waterman, H. I.

Soie de Chatillon, winding of artificial silk, (P.), B., 750.

Soika, G., analysis of a preputial stone, A., 1331.

Sokolnikov, O., blood-tryptases and a micro-method for their determination, A., 1476. Sokolov, A. V. See Nekrassov, V.

Sokolov, N. See Petrov, G.

Sokolov, P. I., and Dreving, V. P., anthraquinone solutions in sulphuric acid, B., 88.

Sokolov, P. I., and Gurevitsch, L., determination of anthraquinone in mixtures with benzanthrone, A., 205.

Sokolov, W. A., determination of radium content from the y-radiation, A., 621. Sokolova, M. N. See Shukov, I. I. Solakian, H. N. See Freeman, J. R., jun.

Solar Research Corporation. See Chesney, J. W. D.

Solarino, G., inhibiting action of polysaccharides on dextrose hyperglycæmia, A., 844.

inhibiting action of insulin on dextrose hyperglycomia, A., 1110.

Solazzo, L. Soe Mazza, F. P.

Soleillet, P., polarisation of light emitted by fluorescence, A., 120. parameters characterising partial polarisation of light emitted by fluorescence, A., 1127.

Solidon Products, Inc. See Lukens, H. S. Solodovnikova, L. L., barytes of the radiferous mine at Tiuja-Mujun, A., 904.

Soloman, E. J., and Quam, G. N., solubility of copper in milk, B., 225.

Solon, K. See Düwell, H.

Soltys, A., three compounds extracted from Steyrian lignite, A., 1429.

iosene, a new hydrocarbon from Steyrian lignite, A., 1429.

Soltys, A. See also Pregl, F.

Solvay Process Co. See Henderson, W. N.

Somekawa, E. See Nakahara, W.

Somer, A. J., and Walker, R. B. R., preservation of rubber latex, (P.), B., 949.

Somerville, A. A., and Cope, W. H., effect of temperature on the stress-strain properties of vulcanised rubber, B., 181. Somerville, J. L. See Benjamin, L. R.

Somerville, W., jaws of stone breakers or crushers, (P.), B., 762 Someya, K., use of liquid amalgams in volumetric analysis. XI. Determination of phosphoric acid by using zinc or cadmium amalgam, A., 667.

potentiometric standardisation of ceric sulphate [solutions], A., 1032.

Somigliano, B. See Semeria, G. B.

Somiya, T., analysis of acetic anhydride in the presence of strong acids by thermometric titration, B., 274.

determination of sulphuric acid in a mixture of sulphuric acid, acetic acid, and acetic anhydride, B., 670.

Somlo, F., electrolytic reduction of benzoic acid, A., 776.

Sommer, A.L., and Sorokin, H., effects of the absence of boron and of some other essential elements on the cell and tissue structure of the root tips of Pisum sativum, A., 855.

Sommer, B. E. See Jackson, R. W. Sommer, F., and Deutsche Gasglüchlicht-Auer-Ges.m.b.H., separation of [didymium, etc., from] cerium, (P.), B., 433\*.

Sommer, H., value of ignition method for determining the cotton content of asbestos goods, B., 277.

determination of silk and cotton in asbestos yarns, B., 592.

chemical injury of vegetable fibre products, B., 1009.

Sommer, H. See also Waser, E.

Sommer, H. H., salts in milk; heat coagulation of evaporated milk, B., 1029.

Sommer, L. A., origin of the green auroral line, A., 3.

quantum explanation of the auroral green line based on measurements of the Zeeman effect, A., 112.

Sommer, L. A. Sce also Slipher, V. M. Sommer, O. See Hernler, F. Sommer, W., hurdles for washing gas, etc., (P.), B., 1041.

Sommerfeld, A., production of the continuous X-ray spectrum,

Sommermeyer, K., now spectrum of gaseous alkali halides, and its significance, A., 1363.

Somogyi, M., blood-sugar of corpuscles and plasma in diabetic and alimentary hyperglycemia, A., 209. nature of blood-sugar. II., A., 1096.

Somogyi, M., and Kramer, H. V., blood-sugar, A., 207.

Soncini, J. M. See Viale, G.

Soni, C. L. See Dunnicliff, II. B.

Sonn, A., phloracetophenono monomethyl ether and the so-called "hydroxypmonol," A., 69.

Sonn, A. [with Burkard, J.], lichen products. VI. Synthesis of divaric acid, A., 186.

Sonn, A., and Winzer, K., tautomerism of phloracetophenone and related substances, A., 69.

Sonnekalb, F. See Hieber, W. Sonnino, C. See Bozza, G.

Sonol, J., commercial lecithins and lecithin preparations, B., 374. commercial lecithins and specialities with lecithin as base, B., 796.

Sonsthagen, A., and Poverud, G. M., mills for grinding, crushing, or pulverising material, (P.), B., 268.

apparatus for mixing, compacting, degassing, or grinding viscid material, (P.), B., 762\*.

Soonawala, M. F., structure of atomic nuclei, A., 973.

Soos. See Krumbholz.

Soper, F. G. See Richardson, M. Soper, W. E. See Partington, J. R.

Sorensen, V. See Busch, C. F. E.

Sorenson, E., explosive composition, (P.), B., 539.

Sorg, K., phosphatide content of different kinds of muscle,

A., 839.

Sorg, L. V., rugged type of calomel electrode vessel, B., 1020. Sorokin, H. See Sommer, A. L.

Sorrel, V. See "Intra." Sorum, C. H., conductivity-diffusion method for studying the coagulation of colloidal ferric oxide, A., 645.

Soschestvenskaja, E. See Dodonov,  $\hat{J}$ . Soskin, S. See Campbell, W. R., Chaikov, I. L., and Kilborn, L. G. Sostberg, G., and Steuber, M., influence of heavy metals on the

basal metabolism of guinea-pigs, A., 351.

Souček, J., influence of widening the rows in soil nutrient absorption by the sugar beet, B., 694.

Souček, M. See Bureš, E. Souci, S. W. See Fischler, F.

Soulary, P., and Compagnie des Mines de Bruay, pneumatic sorting of materials of different densities, (P.), B., 1036.

Soule, B. A., containers for caustic solutions, A., 672.

determination of ferrous iron in silicate rocks. II. Electrometric, A., 1032. Soule, R. P. See Klees, A. L.

Soulillou, R., separation of the various spark spectra of antimony,

Soum, M., and Podbreznik, F., solubility of liumic acids in phenol, A., 1275.

Soutar, G.S. See Ludham, E.B.

South Metropolitan Gas Co., and Andrews, A. H., apparatus for quenching coke, (P.), B., 1007.

South Metropolitan Gas Co., Chandler, D., and Cooke, J. J., gas burners, (P.), B., 161.

South Metropolitan Gas Co., Evans,  $E.\ V.$ , and Stanier, H., manufacture of coal gas, (P.), B., 347.

South Metropolitan Gas Co., Pickard, H., and Stanier, H., treatment of oils, tars, or pitches derived from coal to modify their viscosities at predetermined temperatures, (P.), B., 803.

South Metropolitan Gas Co. See also Carpenter, C. Souther, B. L., Grnse, W. A., and Gulf Refining Co., treating slack wax, (P.), B., 10.

Southwell, C. A. P. See Parker, J. S.

Southwestern Portland Cement Co. See Velzy, J. E. Southwich, C. A., jun. See Frolich, P. K.

Southworth, J., negative developers for contrast, B., 37. Sowden, W. See Clayton, Son & Co., Ltd.

Sowder, A. M., toxicity of water-soluble extractives and relative durability of water-treated wood flour of Western red cedar, B., 1045.

Soyka, C. See Dyson, C. M. Spack, A. See Cornec, E.

Spackman, L. S. See Parker, A. J.

Spacu, G., and Dick, J., double salts. XVI. and XVII. Ammino bromides, A., 281.

rapid determination of mercury, A., 416.

rapid microchemical determination of copper, A., 1259. double salts. XIX. Ammines of double bromides, A., 1409. determination of zinc, A., 1412.

Spacu, G., and Ripan, R., selenocyanoammines. I., A., 41. Spacu, G., and Suciu, G., rapid determination of cadmium, A., 900.

rapid determination of mercury, A., 901.

rapid microchemical determination of mercury, A., 1259. gravimetric macro- and micro-chemical determination of copper, A., 1413.

Spacu, G., and Voicu, O., double salts. XV. Ammine iodides, A., 279.

double salts. XVIII. Ammino-oxalates, A., 1409.

Spadolini, I., adsorptive effect of barium sulphate on intestinal toxins, A., 350.

Späth, E. [with Pass], J.], carnegine, A., 707. Späth, E., and Breusch, F., electrolytic reduction of cyclic imides to hydrogenated cyclic bases, A., 194.

Späth, E., and Hromatka, O., opium alkaloids. X. Syntheses of dl-apomorphine dimethyl ether, A., 457.

Spath, E., and Kruta, E., synthesis of bases of berberine type from compounds of the type of tetrahydropapaverine, A., 201. synthesis of r-corydaline, A., 708.

Spath, E., and Kuffner, F., identity of pectinin with carnegin, A., 1319.

Spath, E., and Papaioanou, G., phenol bases from Angostura bark; synthesis of galipoline, A., 1087. Spath, E, and Pike, J, angostura alkaloids. IV. 4-Methoxy-2-

n-amylquinoline, a basic component of angostura bark, A., 1319.

constitution of oxyacanthine, A., 1319.

Spath, E., and Polgar, N., synthesis of dehydrogenated isoquinoline derivatives, A., 578. quaternary bases from Berberis vulgaris, A., 1087.

Spath, E., and Posega, R., synthesis of coptisine, A., 707.

Spath, E., and Schmidt, Oskar, constitution of  $\psi$ -baptisin, A., 1458. Späth, E., and Strauhal, F., constitution of laurotetanine, A., 80. Spagnol, G., fixation of suspensoids [in the body] by anæsthetics and narcotics, A., 96.

fixation of colloids caused by chloroform, A., 348.

Spagnolo, G. See Mazza, F.  $\dot{P}$ .

Spa-Monopole, Compagnie Fermière des Eaux et des Bains de Spa, automatic and continuous activation of water by means of radium emanation on an industrial scale, (P.), B., 266.

Spangler, S. F., recent developments in the manufacture of sulphuric acid, B., 555.

Spanner, H.J. See Naaml. Venn. Internat. Octrooi-bureau. Spanyar, P. See Vuk, M. Sparchez, T. See Gavrila, J.

Sparks, M., colouring the surface of wood, (P.), B., 210.

Sparling, E. M., chemical derivatives of bios II, A., 472. Spasski, N., determination of the oil content of seeds without heating, B., 292.

application of castor oil in soap manufacture, B., 402. Spaulding, C. H., preammoniation [of water] at Springfield,

Illinois, B., 836.

Speak, H. B., Gee, A. H., and Luck, J. M., influence of sodium chloride on the growth and metabolism of yeast, B., 107. Speakman, J. B., rigidity of wool and its change with adsorption

of water vapour, B., 277. elastic properties of wool in water at high temperatures,

B., 388. adsorption of water by wool, B., 847.

action of caustic soda on wool, B., 1009.

Speakman,  $J.\ B.$  See also Sever, W.,jun. Spear,  $E.\ B.$ , Boggs,  $C.\ R.$ , Simmons,  $H.\ E.$ , Trumbull,  $H.\ L.$ , and Shepard,  $N.\ A.$ , report of the Raw Rubber Specifications Committee, B., 294,

Spears, H. D., and Terrell, W. G., shortening the time of [Kjeldahl] nitrogen determination by the use of the grid burner, B., 658. Specchia, O., magnetic susceptibility of praseodymium sulphate

solutions, A., 1134.

Spectrum Dyes Proprietary, Ltd. See Lloyd, G. F.

Spedding, F. H. See Freed, S.

Speer, J. H., Cole, V. V., and Heyl, F. W., sodium and potassium balances, when used as citrates in acidotic and rachitic conditions in rats, A., 596.

Speer, J. H., Wise, E. C., and Hart, M. C., composition of spinach

fat, A., 855.

Speer, J. H. Sce also Cole, V. V., and Heyl, F. W.

Speicher, J. K., and Pleiffer, G. H., falling-ball method for measurement of the apparent viscosity of collulose nitrate solution,

Speichert, M., and Hüttenwerke Tempelhof A. Meyer, production of copper sulphate, (P.), B., 597.

Speight, E. A. See Imperial Chem. Industries, Ltd.

Speiser, B. See Lustig, B.

Spek, J., structure of living matter in the light of colloid research, A., 208.

Speller, F. N., corrosion: a problem in protective coatings, B., 559.

Spence, B. J., and Easley, M. A., near infra-red absorption spectra of some halogen derivatives of ethane, A., 1215.

Spence, K. C., effect of irradiation on the blood chemistry in tuberculosis, A., 93.

Spence & Sons, Ltd., P., Craig, T. J. I., and Kirkham, A., preparation of silica from silicate solutions, (P.), B., 17.

Spence & Sons, Ltd., P., and Crundall, S. F. W., preparation of

[anhydrous] calcium sulphate, (P.), B., 1014.
Spence & Sons, Ltd., P. See also Ormandy, W. R.

Spencer, C. C., acetolysis of cotton cellulose, B., 389.

Spencer, C. M. See Anode Rubber Co., Ltd.

Spencer, D. A., photographic applications of diazo-compounds, B., 73.

Spencer, E., extraction of cellulose or paper pulp from fibrous vegetable matter containing the same, (P.), B., 202.

Spencer, E., and Sen, K. B., mixed bromides in place of chlorides in alkali determinations, A., 530.

Spencer, E. See also Bird & Co.

Spencer, G. See Pollopas, Ltd.

Spencer, G. C., and Krumboltz, O. F., chemical composition of Alaskan lichens, A., 1347

Spencer, G. C. See also Collins, W. D.

Spencer, H., water content of blood-scrum, A., 1189.

Spencer, H. J. See McClellan, W. S.

Spencer, H. McC., manufacture of sized fibrous product, (P.),

Spencer, J. F. See Pring, M. E.

Spencer-Hopwood, Ltd., and Hitchcock-Spencer, A. L., boilers for evaporating or heating liquids, (P.), B., 963.

Spencer Kellogg & Sons, Inc. See Schwaroman, A.

Spencer Thermostat Co., and Sellman, N. T., safety device for burners, (P.), B., 844.

Spencer Thermostat Co. See also Marshall, L. K.

Spencker, K. See Ohle, H. Spengler, J. P. See Spengler, P. J.

Spengler, O., coating cast iron with lead, (P.), B., 330\*.

Spengler, O., and Brendel, C., final saturation of [sugar] thin-juice,

incrustations in the carbon dioxide piping [of beet-sugar factories], B., 33.

behaviour of oxalic acid in the purification of [beet] juices,

determination of the end-point in carbonatation [of beet juice], B., 655.

sugar content of carbonatation scums, B., 655.

Spengler, O., and Paar, W., effect of the drying of fresh beet cossettes on the content of nitrogenous compounds in the exhausted cossettes, B., 223.

Spengler, O., and Thurm, A., tanning material, (P.), B., 615\*. Spengler, O., Todt, F., and Shen, C., fermation of molasses,

B., 223. Spengler, O., and Traegel, A., behaviour of phosphoric acid during liming and carbonatation in relation to the natural alkalinity [of beet juices], B., 790.

Spengler, O., and Zablinsky, K., occurrence of zinc in products of sugar manufacture, B., 655.

Spengler, O. See also Grasselli Dyestuff Corporation, and I. G. Farbenind. A .- G.

Spengler, P.J., and Spengler, J.P., brick, pottery, and like tunnel ovens or kilns, (P.), B., 816. briquetting of coal, coke, etc., (P.), B., 932.

Spensley, J. W., production of intimate mixtures of substances and of chemical products therefrom, (P.), B., 762\*.

Speranzini, G. See Vecchiotti, L.

Sperr, F. W., jun., gas purification in relation to coal sulphur, B., 931.

Sperr, F. W., jun., and Koppers Co., gas purification, (P.), B., 10\*. pitch-coking process and product, (P.), B., 233. gas and liquid contact apparatus, (P.), B., 665. gas-purification process and apparatus, (P.), B., 1007\*.

Sperry, E. A., and Sperry Development, Co., refining of crude fuel oil, (P.), B., 588.
Sperry, W. M., lipin excretion.
V. Partition of fæcal lipins with

reference to bacteria, A., 464.

Sperry, W. M., Elden, C. A., Robscheit-Robbins, F. S., and Whipple, G. H., blood regeneration in severe anomia. XV. Liver fractions and potent factors, A., 464.

Sperry Development Co. See Sperry, E.A. Sperry Gyroscope Co. See Stark, K.H.

Speyer, E., fissions with ozone in the morphine series, A., 336. Spezialfabrik für Aluminium-Spulen & Leitungen Ges.m.b.H., production of insulated coverings on wires, bands, plutes, or

sheets of aluminium or aluminium alloys, (P.), B., 331. Spicers, Ltd., and Friedlaender, H., treatment of fibrous material, (P.), B., 976.

Spicers, Ltd., and Hands, H. J., manufacture of sheets or films of composition containing cellulose esters or ethers, (P.), B., 203.

Spiegel-Adolf, M., protein denaturation. I. Denaturation by alcohol, A., 459.

effect of short-wave radiation on proteins, A., 777.

Spiegel-Adolf, M., [with Krumpel, O., and Fernau, A.], irradiated proteins. III. Velocity of coagulation by light of various proteins, A., 1405.

Spiegel-Adolf, M., and Krumpel, O., irradiated proteins. VII. Ultra-violet absorption of serum- and egg-albumin denatured by heat, ultra-violet-, radium-, and X-rays, A., 947.

Spiegel-Adolf, M., and Oshima, Z., irradiated proteins. VI. Spectroscopic and biological evidence of changes in proteins produced by light, A., 947.

Spiegel-Adolf, M, and Pollaczek, K. F., irradiated proteins. VIII. Relation of the velocity of coagulation by light of protein solutions to their sterility, A., 1492.

Spiegel-Adolf, M. See also Eisler, M., and Fernau, A.

Spieler, J. See Soc. Chem. Ind. in Basle.

Spielmeyer, G. See Heller, G.

Spiers, C. H., tannery laboratory equipment, B., 446. one-bath chrome-tanning process in the light of Werner's co-ordination theory, B., 614.

Spiers, H. M. See Condrup, C. O.

Spijker, P. van 't. See Waterman, H. I.

Spilker, A., softening points of pitches and asphalts, B., 383.

Spilker, A. L. H., Zerbe, C., and Gesellschaft für Teerverwertung m.b.H., processes for hydrogenating and splitting hydrocarbons, the distillation products of various coals and their constituents, as also the coals themselves, (P.), B., 120.

Spina, J. A., and Hooker Electrochemical Co., manufacture of ammonium benzoate, (P.), B., 472.

Spina, V. See Minunni, G. Spinks, J. W. T. See Allmand, A. J.

 Spiro, K., [electrostatics in biochemistry], A., 845.
 Spitalski, E. I., Petin, N. N., and Burova, E. I., catalysis and processes of transformation of colloids. I. Catalysis of [decomposition of hydrogen peroxide by ferric salts. II. Mechanism of hydrolysis of iron salts and the properties of colloidal hydrosols. III. Colloidal hydrogels of iron and their transformation, A., 150.

Spitalski, E. I., Petin, N. N., and Konovalova, B. A., heterogeneous catalysis of hydrogen peroxide by copper compounds,

A., 152.

Spitalski, E. I., and Pitscheta, V. V., electrochemical polarisation of platinum, A., 145.

Spittle, H. M., and Wardlaw, W., complex oxalates of quadrivalent molybdenum, A., 678. Spitzer-Neumann, E. Sce Klemenc, A.

Spitzin, V., analytical chemistry of tungsten. I. Berzelius' method for determination of tungsten as mercurous tungstate, A., 165.

Spitzin, V., and Kaschtanov, L., analytical chemistry of tungsten.
II. Quantitative analysis of tungsten compounds in the dry way, A., 165. tantalum, A., 1253.

Spiwak, G., electron- and ion-streams in gases at low pressures, A., 484.

Splittgerber, A., prevention of boiler corrosion by addition of alkali, B., 836.

Spoelstra, D. B., bamba oil and the terpenes and higher-boiling fractions of cajeput oil, B., 376.

Spoelstra, D. B., and Royen, M. J. van, occurrence of euxanthone in heart-wood of Platonia insignis, Mart ("Geelhart" or "Pakoeli"), A., 730.

Spolverini, fluorescence and conservation of irradiated foodstuffs;

infant foods, B., 225.

Sponer, (Miss) H., light absorption and the nature of molecular combination in gases and vapours, A., 10.

Sponer, (Miss) H., and Watson, W. W., molecular absorption of iodine in the vacuum ultra-violet, A., 978.

Spoon, W., and Beumée-Nieuwland, N., determination of the rubber content in latex preserved with sodium phosphate and formalin, B., 366.

Spooner, T., and Westinghouse Electric & Manufacturing Co., magnetic pyrometer, (P.), B., 217.

Sporca, detection of gold and the platinum metals [in ores],

B., 286.

Spragg,  $W.\ T$ . See Kermack,  $W.\ O$ . Sprague,  $F.\ O$ ., water penetration tests for sole leather, B., 531. Spranger, W., body fats; physiology of fat deposition, A., 845.

Spraragen, W., welding in the chemical and process industries,

Sprenger, G. See Schumacher, H. J.

Sprenger Patentverwertung Jirotka m.b.H., O., and Jirotka, B., production of coatings on metal articles, (P.), B., 687.

coating metals [e.g., iron, aluminium, zinc, etc., with manganese dioxide], (P.), B., 725.

Sprenger Patentverwertung Jirotka m.b.H., O. See also Jirotka, R.

Spring, F. S. See Heilbron, I. M.

Springborn, A., and Gottschalk, A., iodine and exophthalmic goitre, A., 1100.

Springborn, A. See also Gottschalk, A.

Springborn, E. von, furnaces for burning sewage sludge and similar materials, (P.), B., 76. treatment of sewage, (P.), B., 418.

obtaining soaps and oils from sewage, (P.), B., 962. Springemann, W. See Thiel, A.

Springer, L., testing of glass for chemical resistance, B., 1044. Springer, U., determination and characterisation of organic

substances in soil, B., 183. Springer, W., turbidity and solidification times of solid fats, with

especial reference to cacao butter, B., 564.

Sprockhoff, starch factory control; [moisture determination], B., 223.

water content of potato starch, B., 412. new starch tables, B., 791.

sources of waste in the manufacture of starch, B., 952. amylases in dry potato starch, B., 952.

Sproesser, W., absorption spectra and fluorescence of fats,

Sprout, Waldron & Co. See Snyder, S.

Sprucolite Corporation, and Ollesheimer, L. J., compressed laminated products and their manufacture, (P.), B., 615.

Spurway, C. H., some effects of fertilisers on the nature of the soil solution, with special reference to phosphorus, B., 106. Spychalski, R. See Gałecki, A.

Squibb & Sons, E. R. See Nitardy, F. W.

Squire, A. J., and Lindvart, J. J., cream separator, (P.), B., 415. Sreenivasaya, M., and Sastri, B. N., dilatometric studies in

enzyme action, A., 1488. Sreenivasaya, M. See also Krishna, B. H. R., Narayama, N., and Rao, D. A, R.

Sribyatta, L. See Bazett, II. C. Srikantia, C. See Rao, M. G. S.

Staalsyndicaat Ledeboer. See Ledeboer, A. E. M. Staatliche Porzellan-Mannfaktur. See König, Alfred. Stabavite Syndicate, Ltd. See Stabback, A. G. M.

Stabback, A. G. M., and Stabavite Syndicate, Ltd., preservation of edible products, (P.), B., 376. Stabilimenti Chimici Industriali, manufacture of a [mouldable]

composition of matter [from cellulose], (P.), B., 204.

Stach, E., and Kuhlwein, F. L., microscopical examination of fine coal cleaning products by the method of relief-polishing, B., 382.

Stach. W., nourishment of pross yeast with inorganic ammonium compounds, B., 833.

Stachorski, K. M., surface tension of mixtures of associated and non-associated liquids, A., 638.

change of coefficient of expansion of normal liquids with temperature, A., 992.

Stachorski, R. M. See Iltschenko, I. F.

Stadeler, A., determination of silicon in ferrosilicon and in other iron alloys, B., 326.

Stadie, W. C., thermionic valve potentiometer for the determination of  $p_{\rm H}$  with the glass electrode, A., 1262.

Stadler, H., darkening of worts during the preparation of pale beers, B., 144.

Stadler, P. See Schlubach, H. H., and Waldschmidt-Leitz, E. Stadnikov, G. L., and Goldfarb, I., alkylation and acylation of thiophen in presence of tin tetrachloride, A., 74.

Stadnikov,  $G. \hat{L}$ , and Kaschtanov, L. J., titanium tetrachloride in

organic synthesis, A., 54.

Stadnikov, G. L., and Korschev, P., humic acids, B., 231.

Stadnikov, G. L., and Proskurnina, N. F., theory of the formation of petroleum. III. Composition of the low-temperature tar from Chachareiski boghead coal, B., 42.

reducing action of various coals in an aqueous medium, B., 382.

Stadnikov, G. L., and Sabawin, W., carboxylic acids in peat tar, B., 157.

Stadnikov, G. L., and Titov, N. G., nitrilotricarboxylic acids, A., 441.

peat bitumen, B., 42.

Stadnikov, G. L., and Vosschinskaja, Z. S., transformation of the fatty acids during geological epochs. II., B., 158, 272\*. insulating oils, B., 504.

Stadnikov, G. L., and Weizmann, A. E., transformation of the fatty acids during geological epochs. I. and III., B., 158, 272\*, 1002.

Stäger, A. See Scherrer, P.

Stäger, H., litharge-glycerin cements, B., 520.

Staerk. Sco Freckmann. Stafford, J. G. See Phillips, E. B.

Stahl, W., copper-cuprous oxide eutectic in copper refining, B., 286.

Stahlwerk Becker Akt.-Ges., manufacture of [high-speed] steel, (P.), B., 479.

Staiger, and Glaubitz, frozen yeast, B., 413.

solid molasses, B., 533.

dextrin-fermenting yeasts, B., 792.

influence of treatment of yeast with varying amounts of sulphuric acid on the fermentative power, B., 907.

Stair, R. See Coblentz, W. W., and Mohler, F. L.

Stalhane, B., systems: borates and halides of sodium in the fused state, A., 1012.

Stallings, J. H., potato fertiliser experiments, B., 66. soil type and crop adaptation, B., 830.

Stallman, B. See Dilthey, W.

Stallmann, O. See Gubelmann, I.

Stamberger, P., vapour-pressure diminution of rubber jellies, A., 1383.

vulcanisation of oils. II., B., 26.
Stamberger, P., and Blow, C. M., swelling of rubber, B., 691.
Stamberger, P. See also Blow, C. M., and Ghosh, B. N.

Stamm, A. J., capillary structure of soft woods, A., 508. effect of electrolytes on electro-endosmosis through wood

membranes, A., 759.

density of wood substance, adsorption by wood, and permeability of wood, B., 395.

fibre saturation point of wood as obtained from electrical conductivity measurement, B., 474.

structure of soft woods as revealed by dynamic physical methods, B., 810.

Stamm, A. J. See also Sve Stamm, H. See Weitz, E. See also Svedberg, T.

Stampe, G., and Horn, E., sodium peroxide respirators, B., 798. Standard Brands, Inc. See Hamburger.

Standard Development Co., treatment of hydrocarbon residues, (P.), B., 46.

cracking of hydrocarbon oil, (P.), B., 161.

conversion of hydrocarbon oils into lighter oils, (P.), B., 161. Standard Development Co., Becker, A. E., and Stonaker, De V., lubrication of textile fibres, (P.), B., 202.

Standard Development Co. See also Buc, H. E.

Standard Oil Co., knitting of rayon fibres, (P.), B., 203.

textile oils, (P.), B., 242.

petroleum distillates and treatment of same with respect to discoloration, (P.), B., 634.

Standard Oil Co. See also Bransky, O. E., Brewster, O. C., Broderson, H. J., Davis, W. N., Holland, W. W., Payne, E. H., Rogers, F. M., Sullivan, F. W., Watts, G. W., Wilson, R. E., and Zweig, C.

Standard Oil Co. of California. See Cushman, O. E., Deacon, J. C., Gray, E. D., Hanna, R. W., Osborn, R. T., and Terry, J. B.

Standard Oil Development Co., manufacture of esters, (P.), B., 275. manufacture of isopropyl acetate, (P.), B., 315.

cracking of hydrocarbon oil and apparatus therefor, (P.), B., 548.

manufacture of apparatus for use in distillation and cracking of oils, (P.), B., 633.

Standard Oil Development Co., and Coleman, S. P., obtaining highboiling organic acids from their mixtures with high-boiling oils, (P.), B., 884.

Standard Oil Development Co. Sco also Becker, A. E., Buc, H. E., Cobb, E. B., Coleman, S. R., Hewetson, H. E., Hopkins, M. B., Howard, F. A., Hughes, W. S., Kraus, C. A., Lane, R. S., Lewis, W. K., Links, L., Loomis, N. E., Moore, W., Powell, R. E., Simpson, J., Walsh, L. J., and Ward, C. A.

Standard Patent Process Corporation. See Conant, L. B.

Standard Products Corporation. See Whatmough, W. H. Standard Varnish Work. See Toch, M.

Standel, E.G. See Saslavsky, J.J.

Stander, H. J., and Harrison, E. P., jun., carbohydrate metabolism in eclampsia, A., 1482.

Stanek, V., treatment of beet juices with sodium carbonate, and the juice alkalinity, B., 371.

Staněk, V., and Pavlas, P., evaporation of [beet] juices in the

presence of active carbons, B., 572.

Stanek, V., and Sanders, K., laboratory apparatus with conductimetric indication for the study of saturation and filtration [of beet juices], B., 223. diffusion experiments with dried beet slices, B., 617.

Stanek, V., and Vondrak, J., frothing of [sugar] juice during

carbonatation in the beet sugar factory, B., 32.

Stanier, H. See South Metropolitan Gas Co.

Staniolfabrik Burgdorf Akt.-Ges., production of [metallic] acid-resisting wrapping material, (P.), B., 61.

Stanković, R., Arnovljevic, V., and Matavulj, P., enzymic hydrolysis of keratin with the juice of the crop of Astur palumbarius (hawk) and Vultur monachus (vulture), A., 603.

Stanley, H. M., and Nash, A. W., higher hydrocarbons from methane, B., 7.

production of gaseous, liquid, and solid hydrocarbons from methane. I. Thermal decomposition of methane, B., 156.

production of gaseous, liquid, and solid hydrocarbons from methanc. II. Action of the spark discharge on methane, B., 766.

Stanley, L. F., sensitive form of Pirani gauge for the measurement of high vacua, A., 533.

Stanley, W. M., and Adams, R., synthesis of chaulmoogric acid from hydnocarpic acid, A., 810.

stereochemistry of diphenyl compounds. III. Resolution of 2:2'-dihydroxy-1:1'-dinaphthyl-3:3'-dicarboxylic acid, A., 1298.

Stanley, W. M., Jay, M. S., and Adams, R., octa-[and hexa-]decoic acids and their bactericidal action towards B. leprae. XV., A., 676.

Stanley Chemical Co. See Dalbey, G. E.

Stansfield, A., graphical method of teaching the thermo-chemistry of high temperatures, A., 904.

Stansfield, R., and Thole, F. B., standardisation of conditions for measuring the detonation characteristics of motor fuels, B., 585.

Stansfield, R. See also Birch, S. F.

Stantial, H., sporulation of yeast, A., 471.

persistence of acclimatisation to fluoride, after sporulation of yeast, A., 472. Staples, E. M. See French, H. J.

Stark, A. See Bredig, G. Stark, H. See Surface Combustion Co.

Stark, J., elementary processes in emission and absorption of light, A., 223.

structure of the helium atom, A., 234.

duration of elementary light emission, A., 486.

Stark, J., physical criticism of Schrödinger's theory of light emission. I. Intensity relation in the effect of electric fields on spectral lines. II. Amount and frequency of optical energy. III. Fundamental difficulties, A., 731.

asymmetry in the radiation from the hydrogen atom in the

electric field, A., 963.

Stark, K. H., and Sperry Gyroscope Co., electron-discharge device,

(P.), B., 178.

Starkey, R. L., influences of the development of higher plants on the soil. I Historical and introthe micro-organisms of the soil. I. Historical and introductory, B., 447.

influences of the development of higher plants on the micro-organisms of the soil. II. Influence of the stage of plant

growth on the abundance of organisms, B., 570.

influences of the development of higher plants on the microorganisms of the soil. III. Influence of the stage of plant growth on some activities of the organisms, B., 693.

Starkie, D., and Turner, W. E. S., ultra-violet light-transmitting

glasses, B., 245.

influence of ferric oxide content on the light-transmission of soda-lime-siliea glass, with special reference to the ultraviolet, B., 245.

Starkiewicz, J., excitation of fluorescence in bonzene at  $-183^{\circ}$  by monochromatic light, A., 1214.

Starkweather, H. W. See Baxter, G. P. Starlinger, W. See Hartl, K. Starnotti, C., alterations in the blood determined by X-ray therapy, A., 98.

Starr, I., and Gamble, C.J., behaviour of ethyl iodide in the body, A., 339. Starr, J. V.

Sco Rhodes, F. H.

Starr, L. H. See Tyndall, A. M.

Starrels, J., manufacture of high-grade soaps from low-grade fats, (P.), B., 689.

Stary, Z., and Winternitz, R., physico-chemical behaviour of magnesium in serum, A., 838.

Starzewska, M. See Rogozinski, F.

Stasiak, A., and Zboray, B., [biological] evaluation of digitalis, A., 1196.

Stasiak, A. See also Collins, G. W., and Schulek, E. Stassinet, T., removal of vapours from annealing boxes in brightannealing processes, (P.), B., 251.
Stather, E., salt stains. I. Hide damage, B., 140.

Stather, F., and Liebscher, E., (A) appearance and (B) bacteriology of red stains on salted raw hides, B., 991.

Stather, F. See also Bergmann, M. Staub, H., action of synthalin, A., 214.

Staud, C. J., and Gray, H. Le B., reaction of cellulose with phenylhydrazine acetate, B., 593.

Staud, C. J. Soe also Gray, H. Le B. Staude, W. See Elvegard, E. Stauder, K. H. See Schmidt-Ott, A.

Staudinger, H., highly polymerised compounds, XIII., A., 51. highly polymerised compounds, XIV. Constitution of dicyclopentadienes, A., 53.

[silicic acids], A., 410.

chemistry of high molecular organic substances from the point of view of Kekulé's theory. XII., A., 542.

constitution of high molecular substances, A., 680. polyoxymethylenes, a model of cellulose, A., 910.

Staudinger, H., Ashdown, A. A., Brunner, M., Bruson, H. A., and Woheli, S. highly neighbor and capacitation of capacitation of

Wehrli, S., highly polymerised compounds. XXII. Constitution of polyindene, A., 1435.

Staudinger, H., and Bondy, H. F., isoprene and caoutchouc. XIV., A., 321.

isoprene and caoutchouc. XVI. Constitution of caoutchouc, A., 1307.

Staudinger, H., and Breusch, F., highly polymerised compounds. XVI. Polymerisation of a-methylstyrene, A., 434.

Staudinger, H., and Brunner, M., highly polymerised compounds.

XXV. Polyanethole, A., 1440.

Staudinger, H., Brunner, M., Frey, K., Garbsch, P., Signer, R., and Wehrli, S., highly polymerised compounds. XIV. Polystyrene, a model of caoutchoue, A., 305.

Staudinger, H., and Bruson, H. A., manufacture of highly polymerised products of unsaturated hydrocarbons, (P.), B.,

Staudinger, H., Geiger, E., and Huber, E., highly polymerised compounds. XV. Reduction of polystyrene, A., 306.
Staudinger, H., Johner, H., Schiemann, G., and Wiedersheim, V., highly polymerised compounds. XXIV. Hydropolyindenes, A., 1435.

Staudinger, H., Johner, H., and Wiedersheim, V., highly polymerised compounds. XXIII. Bohaviour of polyindenes when heated, A., 1435.

Staudinger, H., Reichstein, T., and Internationale Nahrungs- & Genussmittel Akt.-Ges., production of artificial coffee aroma,

production of mercaptans of the furfuryl series, (P.), B., 637\*. Staudinger, H., and Schweitzer, O., highly polymerised compounds. XX. Polyethylene oxides, A., 1267.

Staudinger, H., and Signer, R., highly polymerised compounds. XI. [X-Ray examination of highly polymerised organic substances], A., 49.

substances, A., 49.

Staudinger, H., and Wiedersheim, V., highly polymerised compounds. XXI. Reduction of polystyrene, A., 1287.

Stauf, F. W. See Trautz, M.

Stauf, W., birefractometry of plastic masses, A., 138.

Staufer, R. See Halla, F.

Stauffer, W., hardening of high-speed steel, (P.), B., 250.

Stauffer, IV., and Akt.-Ges. der Maschinenfabrik Escher Wyss & Cie., hardening of high-speed steel, (P.), B., 985\*.

Stauss, H. E., reflexion of X-rays from platinum films sputtered on glass, A., 1355. Steacie, E. W. R., and Toole, F. J., single crystals of silver, A., 631.

Stead, A., determination and application of the electrical resistance and  $p_{\rm n}$  value in irrigation soil surveys, B., 447.

Stearn, A. E., and Stearn, E. W., physico-chemical behaviour of bacteria, A., 220.

chemical basis of staining. I. Reaction between dyes, proteins, and nucleic acid, A., 1494.

Stearn, A. E. See also Stearn, E. W.

Stearn, E. W., and Stearn, A. E., variation in staining character of bacteria as related to the reserve food material within the organism, A., 1491.

Stearn, E. W. See also Stearn, A. E. Stearns, G. See Daniels, A. L. Stebbins, A. H., crushing mill, (P.), B., 458.

concentrator, (P.), B., 580.

Steek, L. V. Sco Pike, R. D. Stedeford, L. H., manufacture of cheese, (P.), B., 71.

Stedman, E., relationship between chemical constitution and physiological action. II. Miotic activity of urethanes derived from the isomorie hydroxybenzyldimethylamines, A., 350.

Stedman, E., and Stedman, (Mrs.) E., methylurethanes of isomeric a-hydroxyphenylethyldimethylamines and their miotic activity, A., 692.
Stedman, (Mrs.) E. See Stedman, E.
Stedman, G. H. See Octron, Ltd.

Steece, H. M., fertiliser experiments with cotton, B., 106.

Steel Bros. & Co., Ltd. See Ward, P. J.

Steele, A. R., and Kipping, F. S., derivatives of tri-p-tolylsilicane, A., 458.

Steele, C. C. See Read, J. Steele, E. G. See Sntton, H. M.

Steele, F. A., X-ray examination of the system anhydrous sodium sulphate-aluminium sulphate, A., 867.

Steele, F. A., and Davey, W. P., crystal structure of tricalcium aluminate, A., 1131.

Steele, G., and Cowlishaw, S. D. (Steele & Cowlishaw), mixing machines, (P.), B., 307.

Steele, P. J. See Plyler, E. K.
Steele, T. M. See Hubbard, R. S.
Steele, W. L. See Sutton, H. M.
Steele, W. R. See General Electric Co.

Steele & Cowlishaw. See Steele, G.

Steenbeck, M., measurement of absolute intensity of X-rays, A., 124.

Steenbock, H. See Elmslie, W. P., Elvehjem, C. A., Hart, E. B., and Waddell, J.

Steenhauer, A. J., detection of thallium, A., 1259.
Steenhauer, A. J. Sco also Itallie, L. van.
Steenstrup, C. See Brit. Thomson-Houston Co., Ltd.
Stefanic, S. Sco Bigiavi, D.
Stefanopoulo, G. J. See Hosoya, S.
Steffe, W., and Freier Grunder Eisen- & Metallwerke Ges.m.b.H.,
motiving founded furnace, (P.) B. 667\* melting [cupola] furnace, (P.), B., 687\*.

Steffen, C., and Steffen, C., jun., better utilisation of the lime in the precipitation of calcium saccharate, (P.), B., 260. Steffen, G., jun. See Steffen, C.
Steffenburg, S. See Euler, H. von.
Stegemann, W. See Hofmann, F.
Steger, A., and Loon, J. van, composition of Chinese wood oil (tung oil), B., 103.

thioeyanometry of parsley seed oil, B., 332. Stehberger, K. H. See Becker, A.

Stehli,  $\bar{H}$ . J., sintering zinc ores, (P.), B., 361\*.

Stehlik, V., treatment of beet seed with naphthalene, B., 488. Stehno, H. See Pollak, J. Steidle, H., and Dürr, H., pharmacology of rare-earth metals. III. Samarium, A., 1487.

Steiger, H. See Lüscher, E. Steiger, R. E. See Levene, P. A.

Steigerwaldt, F. See Waldschmidt-Leitz, E.

Steigmann, A, theory of the hydrogen peroxide effect, of physical development, and of the coloration produced by dyes and silver halides, A., 522.

cystine in gelatin-protected noble metal systems, A., 881.

autoreduction of sodium silver sulphite, A., 889.

new photo-reaction with ergosterol, A., 895.

photochemical reductions and oxidations from the electronic point of view, A., 1152.

weak points in the crystal lattice and the speck concentration theory of photographic sensitivity, A., 1405. dyes in photographic reductions and oxidations, B., 265.

chemistry of the liming process [for hides], B., 368. silver iodide in ammonia-made emulsions, B., 871.

theory of photographic light sensitivity, B., 959. panchromatic silver salt sensitisers and their relationship to the theory of hypersensitisation and sensitisation, B., 1032.

Steil, E., and American Gasaceumulator Co., manufacture of porous mass [for storage of acetylene], (P.), B., 844\*.

Stein, A., and Ulzer, F., 4-piperonyl-2:6-dimethylpyridine, A., 1461.

Stein, B. See Grasselli Dyestuff Corporation, Schirmacher, K., and Schmidt, R. E. Stein, C. P. See Barratt, S.

Stein, E. Seo Gardner, E. D.

Stein, G. See Diels, O., and Windaus, A.

Stein, H. Seo Schwenk, E.

Stein, Hyman, Austin, W. E., and Liebowitz, I., bleaching of fur skins, (P.), B., 1012.

Stein, Hyman, Austin, W. E., Liebowitz, L., and Stein Fur Dyeing Co., Ino., manufacture of felt and felt materials, (P.), B., 515.

Stein, I. See Fichter, F. Stein, W. S. See Knipp, C. T.

Stein Fur Dyeing Co., Inc. Sce Stein, Hyman.

Steinbrecher, H., bitumen and the water-soluble and pyridinesoluble constituents of some brown coals, B., 666.

Steinbrückner, A., grinding, crushing, or similar mills, (P.), B., 154. Steiner, K., polarisation of the light emitted in electron collisions

in inert gases, A., 230. Steiner, W. See Bay, Z. Steinfatt. See Densch.

Steingroever, A. See Pringsheim, H. Steinhäuser, K., determination of calcium and magnesium in aluminium containing other alloying elements, B., 899.

Steinhäusser, H., electrodeless ring discharge with undamped excitation, A., 733.

Steinhausen, W. See Gollwitzer-Meier, K.

Steinhoff, E., glycerin used to reclaim china-wood [tung] oil [varnishes], B., 989.

Steinkopf, W., and Dudek, H., organic compounds of arsenic. XV. Existence of the arsenoazo-linking and phosphoarsenobenzene, A., 1471.

Steinmetz, H., crystallographic data for "cardiazol," pentamethylencaminotetrazole, and "dilaudid," A., 126.

Steinour, H. H. See Noyes, A. A. Steinrath, H. See Benrath, A.

Stejskal, K., preparation of a nutrient medium [for absorption through the skin], (P.), B., 113.
Stelfox, J. C. Sco Humphreys & Glasgow, Ltd.

Stella,  $G_{\cdot}$ , combination of carbon dioxide with muscle; its heat of neutralisation and its dissociation curve, A., 1332.

Stellawerk Akt.-Ges. vorm, Wilisoh & Co., [grooved] filling blocks for heat exchange, reaction, and absorption apparatus, (P.), B., 629.

Stelling, O., K-X-ray absorption spectra of some chlorine compounds in aqueous solution, A., 1120.

risk of poisoning when working with mercury, B., 560. Stempel, B., distillation under highly reduced pressures, A., 1261.

Stene, S., increase in acidity of whale oil during its extraction, B., 332.

Stenfors, F. I. E. See Olsson, J. G.

Stengel, W. See Fuchs, W.
Stenger, K. Sco Schirmacher, K.
Stenner, W. See Hahn, Georg.
Stent, H. B., Subramaniam, V., and Walker, T. K., mechanism of the degradation of fatty acids by mould fungi. III., A., 1271.

Stenzinger, T. See Pauli, W.

Stenzl, H., alkyl- and aralkyl-resorcinolearboxylic acids [disinfectants], (P.), B., 427.

Steopoe, A., sp. gr. of trass, B., 1044. Stepanov, F. N. See Tschitschibabin, A. E. Stepanov, N. A. See Uedinov, M. N.

Stepanyan, R. See Dobryanski, A.
Stephan, E. Seo Ruff, O.
Stephens, E., Hall effect, electrical conductivity, and thermo-

electric power of the copper-tin series of alloys, A., 1224.
Stephens, E., and Evans, E. J., Hall effect and other properties of the copper-antimony series of alloys, A., 384.

Stephens, F. G. C., Anderson, L. J., and Cash, W. A., manufacture of titanium oxide [pigments], (P.), B., 27.

manufacture of titanium-containing compounds, (P.), B., 529. Stephens, F. G. C., Anderson, L. J., Cash, W. A., and National Metal & Chemical Bank, Ltd., production of titanium-containing pigments, (P.), B., 566\*.

Stephens, W.A., iodine solution and its manufacture, (P.), B., 886. Stephens, W.J. See Goldstein, J. Stephens, W.R. See Bond, P.A.

Stephenson, H. H., statistical periodic table, A., 373.

Stephenson, J. E., and Bridge, S. W., action of air on flowers of sulphur and ground sulphur, A., 1253.

Stephenson, M. See Cook, R. P.
Stephenson, R. E., crop response to lime on acid soils, B., 143.
colloidal properties of Willametto valley soils, B., 904.

Steppuhn,  $\hat{O}$ . See Utkina-Ljubovzova, XSteps, R. A., brake for centrifugals, (P.), B., 580.

Šterba-Böhm, J., and Škramovský, S., complex scandium oxalates, A., 541.

complex scandium oxalato-compounds, A., 1251.

Sterkin, E. G., and Helfgat, G. I., reagent for detection and determination of quinine, A., 846.

Sterling, J. R., apparatus for extraction of water, oil, and fatty matter from solid material, (P.), B., 63\*.

Sterling, W. F., determination of hoof meal, B., 336. Stern, E., adhesives and paint vehicles, B., 292.

Stern, F. See Nathan, E. Stern, K., E.M.F. in acid and alkaline plant-tissue, A., 138.

Stern, K., and Bünning, E., E.M.F. in plants arising on contact with potassium chloride solutions of different concentrations,

Stern, L., mechanism of the action of oxidising catalysts, A., 603. Stern, M., (Chem. Fabr. Schlutup M. Stern), leaching-out proteincontaining substances such as [salt-containing] fish waste, etc., (P.), B., 659.

Stern, O., magnetic moment of the lithium atom, A., 629 reflexion of molecular rays by the lattice of a crystal cleavage plane, A., 863.

Stern, O. See also Knaner, F. Stern, R., mutual influencing [of flocculation] of cholesterol and cholesteryl ester in colloidal solution, A., 395.

Stern, S. See Fichter, F. Stern, T. E., Gossling, B. S., and Fowler, R. H., emission of electrons from cold metals, A., 968.

Sternberg, S. See Chem. Techn. Ges.m.b.H. Sternheimer, R. See Dresel, K.

Sterzl, E., decomposition of wood with nitric acid, (P.), B., 202. Stettbacher, A., mixtures of pentaerythritol tetranitrate and nitroglycerin as shell-filler and initiating explosive of high brisance, B., 152.

pentaerythritol tetranitrate and its mixtures with nitroglycerin ("penthrinite") as filling materials for projectiles, B., 998.

Stetter, G. See Ortner, G., and Schmidt, E.A. W. Steuber, M. See Sostberg, G.

Steudel, H., detection of vitamin-A, A., 726.

Steudel, H., and Schumann, R., deaminocascinogen, A., 1188.

Stevens, B. M. See Dokkenwadel, F. G. Stevens, D. R. See Taber, G. H.

Stevens, E. P., manufacture of firebrick, (P.), B., 898.

Stevens, G. E. See Moody, A. H.

Stevens, H. P., ageing tests for sponge rubber, B., 611.

Stevens, H. P., and Stevens, W. H., nature of vulcanisation, IV., B., 334. Stevens, K. R. See Waksman, S. A.

Stevens, R. H., and Bethlehem Steel Co., [open-hearth] furnace, (P.), B., 23.

Stevens, R. H., Norris, G. C., Watson, W. N., and Rhodesia Broken Hill Development Co., Ltd., recovery of vanadium [from

solutions], (P.), B., 1015\*. Stevens, T. S., Creighton, E. M., Gordon, A. B., and MacNicol, M., degradation of quaternary ammonium salts. I., A., 180. Stevens, W. F., gaseous explosive reaction at constant pressure;

effect of inert gases, A., 147.

Stevens, W.H., nature of vulcanisation, B., 334. Stevens, W.H. See also Gebauer-Fülnegg, E., and Stevens, H.P. Stevenson, J.W. See Irvine, (Sir)J.C.

Stewart, A. V., and Farma Cream Product Co., Ltd., preservation of eggs, (P.), B., 576.

Stewart, A. W. See Macmaster, J. C., and Russell, A. Stewart, C. P. See Clark, A. J., and Harris, L. J.

Stewart, D., normal cerebrospinal fluid in children, A., 208.

Stewart, F.B. See Lavin,  $\hat{G}.I.$ 

Stewart, G. W., diffraction of X-rays in liquids: benzene, cyclohexane, and certain of their derivatives, A., 985.

Stewart, J. See White, A. Stewart, M. L. See Short, W. F. Stewart, P. W., and Ractliffe, G. H. C., manufacture of [recessed] bricks or building blocks, (P.), B., 285.

Stewart, R., availability of potassium in some Scottish soils, B., 731.

Stewart, R. See also White, A.

Stewart, S., blast-furnace gas washer, (P.), B., 856. Stewart, T. D., and Smith, D. M., induced chlorination of ethylene dichloride; effect of oxygen on the reaction between ethylene and chlorine, A., 1420. Stewart, V. T. Sec Ellis, C.

Stewart & Co., Ltd., D., and Talbot-Crosbie, J. B., sugar manufacture, (P.), B., 1027.
Sthamer, E. M. A., foam-producing composition, (P.), B., 727.

Stheeman, A. A., conditions of activation of washed zymin in relation to co-enzyme, A., 1107.

Stiasny, E. G., chrome tanning compounds, B., 139.

Stiasny, E. G., and Jalowzer, B., tanning of hides and skins, (P.),

Stich, C., colorimetric determination of thallium, A., 164.

colorimetric determination of small amounts of sugar in urine, A., 1099. stability of morphine in aqueous solution, especially on sterilis-

ation, B., 72.

determination of thallium [in wheat] and its toxicity, B., 262. Stich, E. G., conditions for the aëration of fermenting vats in the yeast industry or for the aëration of liquids in general,

Stickings, R. W. E., heterocyclic arsenic compounds. IV. Carbamido-derivatives of arylarsinic acids, A., 202. Stickings, R. W. E. See also Newbery, G.

Stickney, F. S., and Westinghouse Electric & Manufacturing Co., temperature-measuring device, (P.), B., 252. Stickstoffwerke G.m.b.H. See Caro, N.

Stiebeling, H.K. See Sherman, H.C.

Stiles, H., determining thermal conductivity of heat-insulating materials, B., 999.

Stiles, W. S., Talbot's law, fatigue, and non-linearity in photoelectric cells, B., 440. Stiles, W. S. See also Harrison, T. H.

Still, C., distributing plate for gas washers, etc., (P.), B., 877. extracting benzene hydrocarbons from gases produced by carbonisation, (P.), B., 916.

recovery of sulphur from gases, (P.), B., 969.

Still, E. U., and Koch, F. C., biological value of yeast-protein for the rat, A., 213.

Stillwell,  $C.\ W.$ , colours of cobaltous hydroxide, A., 1028. Stilwell,  $G.\ R.$  See Electrical Res. Products, Inc.

Stilz, E. See Cajori, F. A.

Stimson, J.C. See Finch, G.I.

Stinchcomb, G. A., and Barker, E. F., molecular spectrum of ammonia. I. Two types of infra-red vibration bands, A., 488. ammonia.

Stine, C. M. See Du Pont de Nemours & Co., E. I.

Stine, C. M. A., recovery of bromine from sea water, B., 555.

Stiner, O., anæmia as an avitaminosis, A., 716.

Stiner, O., and Diethelm, B., medicated animal foodstuffs, (P.), B., 71.

Stirling Boiler Co., Ltd., and Noble, E. E., [automatic] means for controlling the supply of materials to pulveriser and like mills, (P.), B., 501.

Stitz, J., thermal analysis of beeswax, B., 482.

Stitz, J. See also Orbán, G.

Stiven, D., lactic acid formation in muscle extracts. IV. Comparison between dextrose and glycogen in respect of lactic acid formation and phosphoric ester accumulation, A., 956.

Stobbe, H., and Bremer, K., truxillic and truxinic ketones. II.

Photochemistry of cinnamic acids, chalkones, and their derivatives, A., 1179.

tautomerisation of chalkonesemicarbazones by light, A., 1301.

Stock, A., gas density balance, A., 417.

Stock, A., and Pohland, E., boron hydrides. XII. B<sub>10</sub>H<sub>14</sub>, A., 279.

Stock, A., and Zimmermann, W., determination of very small quantities of mercury, A., 784.

vapour pressure of mercury and some mercury compounds at low temperatures, A., 1373.

possible transference of mercury from grain cauterisers into the harvested corn and flour, B., 109.

Stock, E., determination of acid value of resins, B., 483.

Stockdale, (Miss) J. See Cranston, J. A. Stocker, W., blue milk, B., 795.

Stockert, K., and Grünsteidl, E., toxicity of vegetable milk for infants, B., 736.

Stockert, L. See Berg, P.

Stockfisch, K., and Benade, W., examination of bogs for medicinal

purposes, B., 660.

Stockholders Syndicate. See Blumenberg, H., jun. Stockholms Superfostat Fabriks Aktiebolag, manufacture of a fertilising mixture capable of being strewn, (P.), B., 832.

treating the product of reaction resulting from the treatment of raw phosphates or other phosphate-containing substances with acids, (P.), B., 1044.

Stockholms Superfosfat Fabriks Aktiebolag, and Ramsay, H. G. A., evaporation of cyanide solutions, (P.), B., 517.

Stocks, H. H. See Imperial Chem. Industries, Ltd.

Stockton, A. B. See Hanzlik, P. J. Stockton, McK., and Celite Co., treatment of minerals, (P.), B., 288\*

Stoddard, W. B., Kokatnur, V. R., and Pilot Laboratory, Inc., composition for bleaching; bleaching of foodstuffs, (P.), B., 535. manufacture of fatty acid peroxide, (P.), B., 947.

Stoeltzner, W., chemical reaction for antirachitic vitamin, A., 727

Störmer, C, spectrum of sunlit aurora rays as compared with the spectrum of lower aurora in the earth's shadow, A., 1120. Stoermer, R., and Kootz, H., so-called "liquid distyrene," A., 55.

Stoermer, R., and Schenck, F. [with Buschmann, H.], ring fission in the cyclopropane series. XIV., A., 64.

Stoermer, R., and Wodarg, F., liquid crystals of stereoisomeric cinnamic acids, A., 62

Stötter, H. See Grasselli Dyestuff Corporation, and I. G. Farbenind. A.-G.

Stogov, A. F., and Messkin, V. S., copper steel with a high carbon content, B., 98. molybdenum steels and their use in permanent magnets,

B., 397.

Stokes, G. A., corrosion-resisting steel for laboratory use, B., 854. Stoklasa, J., influence of the iodine ion on the growth and cell increase of halophytes, A., 1345.

Stoklasa, J., and Krička, J., influence of radium on the metabolism of bacteria participating in the nitrogen cycle, A., 220. Stoll, A., Kussmaul, W., and Chemische Fabrik vorm. Sandoz,

oxidation of aldoses, (P.), B., 337\*. Stoll, M. See Ruzicka, L.

Stoll, N., action of nitrogen trichloride on toluene and cyclohexene, A., 687.

Stolle, R. [with Schick, E., Henke-Stark, F., and Krauss, L.], 5-aminotetrazole, A., 828.

Stollé, R., and Badstübner, W., A., 582.

Stollé, R., and Fehrenbach, K., amino-derivatives of 1-thio- and furo-3:4-diazoles, A., 1083.

Stolle, R., Henke-Stark, F., and Perrey, H., action of diazo-

compounds on tetrazolyl disulphides, A., 828.

Stolle, R., and Reichert, W., action of magnesium alkyl and aryl halogen compounds on azodibenzoyl and benzoylazobenzene, A., 1061.

addition reactions of azodicarboxylic esters, A., 1172.

thermal decomposition of azodibenzoyl and methyl azodicarboxylate, A., 1173

Stollenwerk, W., and Bäurle, A., separation and determination of ortho- and pyro-phosphoric acids, A., 667.

Stolley, Inc., R. R. See Boon, G. B.

Stoltzenberg, H., destruction of cacti, (P.), B., 532.

Stolz, F. See I. G. Farbenind. A.-G. Stonaker,  $De\ V$ . See Standard Development Co. Stone, H. A. See Randall, M.

Stone & Co., Ltd., J., and Lambert, W., manufacture of [antimonial] lead alloys [containing manganese], (P.), B., 480.

Stone & Co., J., Lyth, C. J., and Pike, F. J., electrolytically

depositing metal on tubes, (P.), B., 361. Stone & Co., Ltd., J., Pike, F. J., and Lyth, C. J., apparatus for use in electrolytic deposition of metal [chromium] on metal tubes, (P.), B., 440.

Stone & Co., Ltd., J., and Swindale, R. C. B., distillation apparatus [for small amounts of water], (P.), B., 456.

Stone Homes Process, Inc. See Williamson, B. F.

Stoneham, J. See Hamey, A. C.

Stoner, E. C., absorption of high-frequency radiation, A., 737. diamagnetism and space-charge distribution of atoms and ions, A., 982.

ionic magnetic moments, A., 1371.

Stoops, B. I. See Hercules Powder Co. Stoppel, A. E., and Harding, E. P., heating value of coal in nickellined bombs, B., 81.

Storch, H. H., behaviour of zinc oxide and zinc oxide-chromium oxide catalysts in the decomposition and synthesis of methyl alcohol, A., 35.

extension of the intermediate-compound theory of catalysis in

gas reactions, A., 519.

Storch, H. H., and Roessler & Hasslacher Chemical Co., process and catalyst for synthesis of methyl alcohol, (P.), B., 635.

Storch, H. H. See also Gauger, A. W.

Storck, A., and Rippel, A., determination of the nitrogen fixation by legumes by means of the nitrogen-base ratio, B., 370.

Storer, G. E. See Nat. Processes, Ltd.
Storer, R., influence of the factor "soil" in cultural and manurial experiments, B., 32. Story, C. W. H. See Perkin, A. G.

Stott, G. H. See Brook, G. B.

Stott, O., and Matthews & Yates, Ltd., air filtering and other apparatus, (P.), B., 460.

Stout, H. H. See Copper Deoxidation Corporation.

Stout, L. E., and Petchaft, A. W., turbidimetric method for determination of the sulphate content of chromium-plating baths, B., 901.

Stowe, V. M., surface tension of liquid sulphur dioxide, A., 381.

Stowell, E. Z., and Redeker, H. E., rôle of hydrogen in the oscillating arc, A., 1359.

Strachan, J. G., photographic action from metals, woods, etc.,

B., 454.

Strack, E., reaction between carbon disulphide and some diamines and guanidines, A., 300.

Strack, E., and Fanselow, H., diaminobutanes, A., 300.

Strack, E. See also Wrede, F.

Strada, L., elimination of drugs introduced intravenously and subcutaneously, A., 1104.

Strafford, N. See Imperial Chem. Industries, Ltd. Straight, E. H. See Straight, H. R.

Straight, H. R., and Straight, E. H., continuous kiln, (P.), B.,

Strain, H. H., benzoinanilanilide and benzoin-p-tolil-p-toluidide as ammono-benzoin acetals, A., 316.

Strakosch, O. See Riesz, E.

Stranathan, J. D., dielectric constants of benzene, carbon disulphide, and carbon tetrachloride, and of dilute solutions of alcohols in these solvents, A., 1365.

Stranski, I. N., theory of isomorphous overgrowth in ionic crystals, A., 1133.

Stranski, I. N., and Kuheliev, K., isomorphous overgrowth in ionic crystals, A., 1133.

Stranski, L. N., and Mutaftschiev, Z. C., passivity of metals, A.,

Strassberger, L. See Pauly, H.

Strasser, E., and Dietiker, M., production of aluminium castings and moulds for use therein, (P.), B., 823\*.

Strasser, Emmerich. See Weissberger, A.

Strassman, F. See Braune, II.
Stratford, W. M., and Texas Co., revivifying [oil-treated] adsorbent materials, (P.), B., 843.

Stratton, J. A., scattering coefficient of hydrogen according to wave mechanics, A., 973.

Stratton, J. F. O., furnaces, (P.), B., 739.

Straub, F. See Soc. of Chem. Ind. in Basle. Straub, F. G., water treatment to prevent embrittlement [in

steam boilers], B., 494.

Straub, Jan [with Hoogerduyn, M. J. J.], difference in osmotic concentration between yolk and white of egg, A., 264.

Straub, Johann, micro-titration of bismuth, A., 287.

report of the Government Laboratory at Amsterdam for 1928, B., 491.

Strauhal, F. See Späth, E. Straumanis, M., distribution of foreign substances in single crystals of zinc, A., 631

electromotive behaviour of single zinc crystals, A., 989.

Strauss, E. See Bauer, Hugo. Strauss, K. See Goldschmidt, S.

Strebinger, R., microchemical separation of barium and calcium, A., 285.

Strebinger, R., and Reif, W., micro-determination of magnesium with 8-hydroxyquinoline, and its separation from calcium, A.,

Strecker, G., fundamental principles of the "Delthirna" process, B., 320.

Strecker, M. See Lindner, J.

Strecker, O. C., products of cellulose by decomposition of vegetable fibres, (P.), B., 714. Streeter, E. D. See Henry, R. W.

Streeter, L. R., bentonite as a dust carrier for nicotine [in plant sprays], B., 831.

Streger, Inc., A. F. See Nienstadt, A. E.

Streight, A. See Zuckerstein, E.
Streight, H. R. L., and Hallonquist, E. G., cathodic halogen: electrolysis of N-halogenoamides, A., 1247.

Streight, H. R. L. See also Clark, R. H.

Streit, J. See Tykač, B.

Streiter, O. G. See Shaw, M. B. Streinikova, M. M. See Egorov, M. A.

Strieck, F., improvements in Carpenter's apparatus for gas analysis, A., 109.

Striffler, G., apparatus for filtering and bottling fluids under pressure, (P.), B., 80.
Strindlund, J., and Jenssen Co., G. D., heat-exchange coil, (P.)

B., 579.

Stringfellow, W. H., thermal decomposition of ammonia, with particular reference to the existence of active and inactive phases of ammonia, A., 281.

Strobl, H. See Textilwerke Ges.m.b.H., B. G.
Stroble, C. J. S. See Caugherty, W. E.
Strock, L. W., and Lukens, H. S., use of tantalum as cathode for electrodeposition of copper, B., 855

Strömholm, D., regularities in the table of the elements, A., 373. Strohal, D., determination of small amounts of free or organically combined carbon in inorganic substances, A., 586.

determination of calcium carbide in technical calcium cyanamide, B., 775.

Strohmenger, A. P. See Quasi-Arc Co., Ltd.

Stromski, W. See Ipatiev, V. N. Strong, H. W. See Newitt, D. M.

Strong, R. A., low-temperature carbonisation tests on Canadian bituminous coals, B., 41.

Strong, Carlisle, & Hammond Co. See Weintz, J. Strosacker, C. J., Schwegler, C. C., and Dow Chemical Co., manufacture of chloroacetic anhydride, (P.), B., 887.

Strotha, von. See Densch.

Strouta, 70th. See Bulger, H. A.
Struben, A. M. A., treatment [distillation] of carbonaceous materials, (P.), B., 425\*.
Struffmann, F. See Rojahn, C. A.

268 Strugadski, M. See Kljatschkina, B. Strumia, M. See Mudd, S. Struve, O., helium lines in stellar spectra, A., 111. Struyk, A. P. See Kluyver, A. J., and Rapkine, L. Stryker, D., lubricating oil, (P.), B., 1007.
Stschepotjeva, E. S. See Baranov, W. J.
Stscherbakov, J., and Libina, D. M., electrolytic preparation of hydroxylamine, A., 274.
Stscherbakov, J. See also Müller, Erich.
Stuart, E. H., and Lilly & Co., E., optic nerve and retina extract, (P.), B., 377.
Stuart, E. H. See also Sure, B.
Stuart, H. A., variation of dielectric constants of gases and vapours with temperature. II. Ethyl ether, methyl ether, ethylene oxide, and acetone, A., 380. Kerr effect and molecular structure, A., 872. Stubbs, J. R. See Elsdon, G. D. Stuber, B., and Lang, K., orally effective compounds of insulin with bilo acids, A., 1110.

blood coagulation. XX. Inhibition of blood coagulation by heparin. XXI. Blood coagulation and the fluorine content of the blood, A., 1327. blood coagulation. XXII. Significance for blood coagulation of nitrogenous substances, A., 1478. Stucky, C. J., examination of insulin for vitamin-B, A., 221.
Stucky, C. J., and Rose, W. B., physiology of vitamins. VII.
Hæmoglobin, solids, sugar, and chloride changes in the blood of vitamin-B-deficient dogs, A., 960. Stucky, C,J. See also Rose, W.B. Stuckelberg, E.C.G., simultaneous ionisation and dissociation of oxygen and intensities of the ultra-violet O<sub>3</sub>+ bands, A., Stueckelberg, E. C. G. See also Morse, P. M., Smyth, H. D., and Winans, J. G. -Stuhlman, O., and Daniel, A. F., X-ray phosphorescent and thermophosphorescent radiations of kunzite, A., 8. Stuhlman, O., jun., thermophosphorescent radiations of hiddenite and kunzite, A., 979.
Stuhlmann, H. See Hock, H.
Stuhlmann, P. See Cordes A.-G., C.
Stukenbrock, H. See Fries, K. Stull, A., type III pneumococci, A., 958. Stumper, R., effect of the final rolling temperature on the properties of steel rails,  ${
m B.,\ 285.}$ Stürcke, H. E., manufacture of [steel] containers for compressed gases, (P.), B., 100.
Sturdiyant, J. H., and Pauling, L., fine structure of brookite, A., 1223. Sturges, W. S. See Parsons, L. B. Sturm, A., micro-titration of iodine, A., 110. iodine metabolism. III. Iodine metabolism of the thyroidectomised dog, A., 842. Sturm, A., and Buchholz, B., iodine metabolism. IV. Iodine distribution in the human and animal organism in relation to the thyroid gland, A., 842. Sturm, A. See also Heilmeyer, L. Sturm, H. See Heller, K. Sturm, K. See Wessely, F. Sturrock, M. G. Sco Hibbert, H. Stursa, F. See Vesely, V. Sturtevant Mill Co. See Doyle, W. T. Stutz, G. F. A. See Gamble, D. L. Stutzer, H. See Vassiliev, A. A. Styer, J. F. See Frear, D. Styles, E. R. See Hunter, R. F. Styrud, S. See Palmaer, W. Subbarow, Y. See Fiske, C. H. Subrahmanyan, K., soil Actinomyces. II. Mode of occurrence in soil, B., 615. Subrahmanyan, K., and Norris, R. V., soil Actinomyces. I. Introduction, B., 615. Subramaniam, V. See Stent, H. B.

Suchodolski, J. See Chrzaszcz, T. Suchy, R. See I. G. Farbenind. A.-G. Suciu, G. See Spacu, G.

Suck, H. See Fredenhagen, K.

Sudzuki, H. Soo Goto, K.

Sueva, (Frl.) N. See Pavlo, V. Suffern, S. J., and Ramapo Finishing Corporation, decoration of fabrics, (P.), B., 679.
Suga, T. See Takamine, T. Sugar Beet & Crop Driers, Ltd. Sco Owen, B. J. A., 114. A., 1359. nitric acid, B., 675. B., 271. Suchier, A., [simplification of] the citrate test [for the determination of water-soluble phosphate in superphosphate], B., oryzæ, A., 473.

Sugasawa, S. See Keimatsu, S. Sugawara, T., determination of adrenaline in the suprarenal extract from oxen, pigs, cats, dogs, and rabbits, A., 959. Sugden, (Miss) R., ternary system mercuric chloride-mercuric iodide-water, A., 510. Sugden, S., parachor and chemical constitution. X. Singlet linkings in chelated co-ordination compounds, A., 427. molecular volumes at absolute zero. III. Zero volumes, parachors, and molecular diameters, A., 984. Sugden, S., and Wilkins, H., parachor and chemical constitution. XII. Fused metals and salts, A., 983. Sugden, S. See also Garner, F. B., and Henley, W. J. R. Sugimoto, N., diuretin hyperglycamia, A., 1488. Sugino, R., effect of the addition of protein on the surface tension of a sodium glycocholate solution, A., 391. Suginomé, H. See Kuhn, R. Sugiu, K., effect of phosphorus on nitrogenous substances in the bile; effect on amino-acids, A., 1486. Sugiu, K., and Hisasi, O., influence of hemolysis on the secretion of bile, A., 1098.
Sugiura, Y. Sco Nagaoka, H.
Suhrmann, R., hydrogen ions as the cause of the occurrence of spectral selectivity in the photo-electric effect for potassium, regularity of the total photo-electric emission, A., 618. change in the electrical state of metallic surfaces on charging with hydrogen ions and by the bombardment of electrons, Suhrmann, R., and Theissing, H., influence of hydrogen on the photo-electric electron emission of potassium, A., 220. experiments on the explanation of the selective outer photoelectric effect. III. Selective photo-electric effect with potassium films adsorbed on a platinum plate, A., 968. Suida, H., recovery of concentrated acetic acid, (P.), B., 200\*. concentration of acetic acid, (P.), B., 317\*. distillation and vapour-phase extraction of volatile substances [crude pyroligneous acid], (P.), B., 935. Suida, H., and Pöll, H., refining of cracked benzines, (P.), B., 589. Suida, H., Sadler, H., and Noss, F., decomposition of straw with Suida, H., and Schmölzer, A., influence of dusty filling materials on the plastic and elastic properties of bituminous substances, Suida, H., and Titsch, H., acetylated wood, the combination of the incrustation, and a method of separation of the constituents of wood, A., 1429.
Suida, H. See also I. G. Farbenind. A.-G.
Sullivan, F. W., McGill, W. J., Walker, H. L., and Standard Oil Co., pressing of wax containing oil, (P.), B., 770. Sullivan, J. D., device for maintaining a constant rate of flow of liquids [for leaching purposes], A., 1416. dissolution of various oxidised copper minerals, B., 890. Sullivan, J. D., Keck, W. E., and Oldright, G. L., factors governing the entry of solutions into ores during leaching, B., 899. Sullivan, J. D. See also Millar, R. W. Sullivan, J. J. See Rice, F. O.Sullivan, J. T., and Horat, L. E., determination of small quantities of nitrogen in plant materials, B., 336. Sullivant, M. See Hale, H. Sulman, H. L., and Picard, H. F. K., extraction of tin or arsenic from ores, etc., (P.), B., 134. recovery of tin from ores, etc., (P.), B., 525. Sulzer Fréres Société Anonyme, absorption refrigerating machines, (P.), B., 344, 665, 702. installations of dry-cooling of incandescent coke, (P.), B., 746. centrifugal machines, (P.), B., 800. containers for dry-cooling of hot coke, (P.), B., 814. Suman, R. G., nickel anodes and the acidity of the solution, B., Sumbayev, V. S., catalase content of crythrocytes in experimental anæmia, A., 594. Sumi, M., chemical constituents of the spores of Aspergillus ergosterol isolated from the Japanese edible fungus Cortinellus shiitakc, A., 613.

Sumi, M., sterols from vegetables, A., 856. effect of X-rays on ergosterol, A., 1345.

vitamin-D. I. Its influence on vitamin-A, A., 1497.

Suminokura, K., and Nakahara, Z, colorimetric microdetermination of furfuraldehyde, A., 86.

Summers, D. B., and Gardiner, W. C., crystallino mercurous sulphate, and the Weston normal standard cell, A., 1392.

Summers, S. L., ester of salicylic acid and pyruvic acid [for elimination of uric acid], (P.), B., 538.
 Summers & Sons, Ltd., J., and Bottomley, C., furnaces or plant

for the heating and heat treatment of metals or other materials or goods, (P.), B., 963. Sumner, E. See Blunt, K.

Sumner, J. B., and Hand, D. B., isoelectric point of crystalline urease, A., 723.

Sun Oil Co., manufacture of lubricating oils, (P.), B., 274. Sun Oil Co. See also Alleman, G., Maitland, H. T., and Pew,

A. E., jun.

Sundberg, A. G. See Reymersholms Gamla Industri Aktiebolag. Sundberg, H. See Palmaer, W.

Sundberg, T., electrometric determination of chlorine in milk,

Sunde, C. J. See Lauer, W. M.

Sundelin, G., Larson, C., and Manell, E., Swedish fertiliser trials in 1927, B., 409.

Sunder, C., bleaching [cotton] without chemicking, B., 715. Sunder, C. See also Bader, M.

Sunler, A. A., attempt to separate the isotopes of cadmium, A., 115.

critical consideration of some schemes of fractionation, A., 666.

Sunier, A. A., and Gramkee, B. E., solubility of gold in mercury, A., 874.

Sunzeri, G., injection of starch into the blood circulation, A., 597.

Superheater Co., high-pressure drum and its manufacture, (P.), B., 628.

Superheater Co. See also Alsberg, J. Sure, B. [with Walker, D. J., and Stuart, E. H.], dietary requirements for fertility and lactation. XIX. Does copper supplement vitamin-B for lactation? XX. Differentiation of vitamin-B complex in rice-polishings, A., 104.

Sure, B., Kik, M. C., and Walker, D. J., vitamin requirements of nursing young. VI. Anhydraemia of rats suffering from deficiency of vitamin-B, A., 852.

avitaminosis and hæmatopoietic function. I. Vitamin-A deficiency. II. Vitamin-B deficiency. III. Vitamin-E deficiency, A., 1203.

Sure, B., and Smith, M. E., effect of vitamin deficiencies on carbohydrate metabolism. I. Hypoglyczmia associated with anhydræmia in young rats suffering from deficiency of vitamin-B,, A., 852.

Surface Combustion Co., Heames, R. M., Stark, H., and Lindquist, B. W., heat-treating furnaces, (P.), B., 479.

Surface Combustion Co. Sco also Hepburn, W. M., Manker, F. W., and Vaughn, S. P.
Suri, H. D. Sec Dunnicliff, H. B.

Surie, E. See Mellanby, E.

Surjaninov, M., [three-phase current] electric induction furnace, (P.), B., 216.

Susich, G. von. See Mark, H. Sussbach, H. H. E., modification of the sulphitation process of clarification of cane juices, B., 371.
Sust, A. K. See Kondyrev, N. V.
Susterová, B. See Bureš, E.
Suszko, J. See Mazak, P.

Sutax, Ltd., and Sutcliffe, J. W., sterilisation and like [heat] treatment of food and like products [put up in containers], (P.), B., 226.

Sutcliffe, J. W. See Sutax, Ltd.
Suter, C. M., synthesis in diphenyl ether series. I. Simple

derivatives, A., 1174.
Sutherland, J. W. See Sandin, R. B.
Sutherland, R. L. See Lavine, I.

Sutoki, T., mechanism of crystal growth by annealing, B., 22.

Sutter, E., cheese packing [in tin foil], (P.), B., 868.
Sutton, D. S., and Veedip, Ltd., thickening and treatment of latex,

(P.), B., 652.
Sutton, H., influence of pickling operations on the properties of steel, B., 437.

Sutton, H. M., Steele, W. L., and Steele, E. G., dry separation of masses of materials, (P.), B., 458.

[screening] apparatus for dry-milling of coal and its by-products, (P.), B., 1007.

Sutton, R. M., ionisation of gases by positive ions, A., 483.

Suzuki, B., separation of glycerides. VI. Linseed oil, soyabean oil, and whale oil. VII. Herring oil. VIII. Cod oil. IX. Sardine oil. X. Sand cel oil. XI. Oil from Theragra chalcogramma. XII. Cuttle-fish oil. XIII. Red salmon oil. XIV. Shark-liver oil, A., 1271.

Suzuki, B., and Yokoyama, Yoshikuni, separation of glycerides. XV. Two new fatty acids from fish oils, A., 1271.

Suzuki, F. See Fuwa, K.

Suzuki, K., catalytic reduction of geraniol and citronellal by means of nickel, A., 297.

Suzuki, Seitaro, upper limit of energy density and the degradation of gas at high temperatures, A., 636.

statistics of Bose and Einstein and of Fermi and Dirac and the upper limit of energy density, A., 636.

Suzuki, Shigekiyo, biochemical studies of pityrol. V. Basio constituents, B., 157.

Suzuki, T., and Kurita, T., attempt to remove hydrogen from higher fatty acids, A., 204.

Suzuki, Tazo. See Akabori, S.

Suzuki, Tetsuo. See Kondo, Kinsuke.

Sveda, J., and Uzel, R., determination of tin by rapid electrolysis, A., 671.

Svedberg, T., heterogeneity of colloidal solutions and sedimentation in a centrifugal field, A., 26. mass and size of protein molecules, A., 835.

Svedberg, T., and Heyroth, F. F., hydrogen-ion activity and the stability of the hæmocyanin of Helix pomatia, A., 458. mol. wt. of hæmocyanin of Limulus polyphemus, A., 458.

Svedberg, T., and Sjögren, B., mol. wt. of serum-albumin and of serum-globulin, A., 203.

Svedberg, T., and Stamm, A. J., mol. wt. of edestin, A., 1092. Svensson, G. See Scheele, C. von.

Sveschnikova, E. A. See Smorodincev, J. A. Svetchnikov, V. N., Hadfield steel; correlation of physical properties with microstructure and thermal treatment, B., 1017. Svetlyakov, K. O. See Frolov, S. S.

Swallow, H. T. S. See Dale, A. J.

Swallow, H. T. S. See Dale, A. J.

Swallow, J. C. See Cooke, E. A.

Swaminathan, M., activated sludge process of sewage treatment [at Bangalore], B., 1033.

Swan, C. J., automatic control through temperature or pressure, B., 1.

Swan, J. McP. See Campbell, Achnach, & Co., Ltd.

Swann, H. See Payman, J. B. Swanson, E. E., Thompson, H. E., and Rose, C. L., standardisation and stabilisation of mydriatics and myotics, A., 955.

Sward, G. G., temperature-humidity control cabinet for testing paint, varnish, and lacquer films, B., 293.

abrasion resistance of films, B., 825.

Swarts, F., trifluoro-alcohols. II. Trifluoro-sopropyl alcohol, A., 791.

orienting power of substituents in the benzene nucleus, A.,

Swearingen, L. E. See Reyerson, L. H.

Sweeney, J. S., diets and dextrose tolerance, A., 213.

Sweeney, O. R., and Ralston, A. W., manufacture of oxygen from lime and chlorine, B., 282.

Sweeney, O. R. See also Gilman, H.

Sweet, J. E., and Quick, A. J.,  $\beta$ -oxidation. III. Fato of  $\gamma$ -phenyl-butyric acid in depancreatised dogs, A., 211.

Sweetland, E. J., and Oliver United Filters, Inc., thickener, (P.),

Sweetland, E. J. See also Greenhalgh, G. H.

Swiderska, M., Kostanecka, W., and Warszawska, P., oxidation of colloidal arsenic, antimony, and copper sulphides, A., 1005. Swientoslawski, W., new application of the differential ebullioscope, A., 255.

elimination of systematic errors occurring in the earlier thermochemical data, A., 267.

chullioscopic apparatus for high-pressure researches, A., 418. ebullioscopic and tonometric determinations, A., 786.

stereoisomerism of diazo-compounds, A., 1290.

Swientoslawski, W., Blaszkowska, Z., and Jósefowicz, E., ebullioscopic determination of equilibrium constants, A., 396, 1384\*.

Swientoslawski, W., and Chorazy, M., adsorption of pyridine vapour by coal from Upper Silesia and by its petrographic modifications, B., 231.

Swientoslawski, W., and Poznanski, S., equilibrium constant of

the esterification reaction in the gaseous phase, A., 265\*.

Swientoslawski, W., Roga, B., and Chorazy, M., briquetting of coal dust without the use of binding materials, B., 230. briquetting of coke and semi-coke dust, using coal as a binder, B., 1037

Swientoslawski, W., and Zawidzki, J. G., application of reduced equations to chemical reactions, A., 770, 1242\*.

Swift, E. H., iodometric determination of [ferric] iron, A., 1260. Swift, E. H., and Hoeppel, R. W., volumetric determination of vanadium by means of potassium iodate, A., 785.

Swift & Co. See Richardson, W. D. Swindale, R. C. B. See Stone & Co., Ltd., J.

Swingle, H. S., digestive enzymes of the oriental fruit moth, A.,

composition of commercial acid lead arsenate and its relation to arsenical injury, B., 1026.

Swinne, R., atomic dynamics of ferromagnetic substances, A.,

Swinne, R., and Siemens & Halske Akt.-Ges., electromagnetic body, (P.), B., 858\*.

Swinnerton, A. A. See Gilmore, R. E.

Swinney, F., froth-flotation concentration of ores, (P.), B., 59. Swinney Bros., Ltd. See Thompson, H. A.

Swirles, (Miss) B., internal conversion of  $\gamma$ -rays. II., A., 6. Swisher, M. C. See Ekeley, J. B.

Swoboda, K., determination of vanadium in steel, B., 131. determination of sulphur in plain and alloy steels, pig iron,

ferro-alloys, etc., B., 601. Sworykin, A. Sec Tammann, G.

Sykes, C., alloys of zirconium. II., B., 328.

Sykes, E. P. See Sykes & Sons, Ltd., J.

Sykes & Sons, Ltd., J., and Sykes, E. P., dyeing machines, (P.), B., 205.

Sylvester, J. See Frazier, C. E.

Sym, E., chemical equilibria in enzymic systems, A., 1490. Symakov, V. N., and Kravkov, S. P., soil structure. I. Mutual interaction of the sols of ferric hydroxide, silicic acid, and permanganate, B., 568.

Symington, S. See Woodall-Duckham (1920), Ltd. Symmes, E. M., and Hercules Powder Co., manufacture of abietic acid esters of polyglycerol, (P.), B., 333.

Symmes, E. M., and Lantz, E. A., application of the vacuum tube in the falling-ball method [of determining viscosity] for dark-coloured solutions, A., 418.

Symons, A. S. M., and Daley, J., Zeeman effect for the arc spectrum of gold, A., 1207.

Symons, G. E., and Buswell, A. M., biochemical oxygen demand of certain substances, B., 798.

comparison of the dilution and absorption methods for determination of biochemical oxygen demand [of sewage], B., 1033.

Symons, H. D., insulation [tape] material for electric apparatus, (P.), B., 253.

Syndicat d'Études des Matières Organiques. See Soc. d'Études et d'Exploit. des Matières Organiques.

Syndicat Internationale du Cimentoils, waterproofing of lime and cement mortars, wood, etc., (P.), B., 209.

Syntheta A.-G., [spinning] apparatus for manufacture of artificial silk, (P.), B., 976.

[pump] apparatus for spinning artificial silk, (P.), B., 1011. Synthetic Ammonia & Nitrates, Ltd., and Rule, A., apparatus for effecting chemical reactions under pressure, (P.), B., 457.

Syrkin, J. K., dimensions of diatomic molecules, A., 1219. Szames, (Mllc.) G. See Jablezyński, K.

Szancer, H., Bial's reagent and various colour reactions of carbohydrates, A., 1426.

Bial's pentose reaction, A., 1426.

trinitrophenol as a sugar reagent, A., 1426 detection of ethyl phthalate in spirits, B., 793.

Szayna, A., action of aluminium chloride on olefinic hydrocarbons, B., 117.

Szebellédy, L., determination of strontium and barium, A., 1258. Szeberényi, P., volumetric determination of polysulphides, A., Szegő, L., relationship between absorption spectra and constitution of azo- and azoxy-compounds, A., 550.

Szegvari, A. See Anode Rubber Co., Ltd., and Klein, P.

Székely, (Frl.) A., conductivity of ionised air at high frequency, A., 1370.

Széki, T., ready conversion of certain derivatives of hydroxyquinol trimethyl ether into quinone compounds, A., 816.

Szelényi, G. von, system o-cresol-methyl alcohol-water, A., 256. Szelényi, G. von, and Becze, G. von, enzyme action of Alternaria solani, A., 1108.

Szelényi, G. von. See also Putnoky, L. von.

Szelöckey, J., action of caffeine on absorption of water by colloids, A., 646.

Szendrő, P., and Fleischer, G., micro-determination of arsenic in cadavers, A., 1486.

Szent-Györgyi, A., function of peroxidase systems and the chemistry of the adrenal cortex; new carbohydrate derivatives, A., 98.

Szent-Györgyi, A. See also Drury, A. N.

Szép, E. See Bodnár, J.

Szép, J., action of pilocarpine on the blood-sugar, A., 1336.

Szidon, V. See Soc. Chim. de la Seine.

Szilagyi, E., direct production of absolute alcohol from the fermented mash, B., 656.

Szilard, L., entropy decrease of a thermodynamic system by the intervention of an intelligent being, A., 511.

polishing and grinding material, (P.), B., 395.

Szivessy, G., and Munster, C., measurement of weakly elliptically polarised light in the ultra-violet, A., 628.

Szivessy, G., and Schweers, C., optical activity of quartz perpendicular to the optic axis, A., 634. Sznkiewicz, W. See Arciszewski, W.

Szombathy, K. See Ammon, E. von.

Szymanski, A. See Marchlewski, L.

Tabart, A. See Lévy, (Mlle.) J.

Taber, G. H., and Stevens, D. R., miscibility of castor oil with gasoline hydrocarbons, B., 86.

Taber, G. H., jun., and Sinclair Refining Co., cracking of hydrocarbons, (P.), B., 706.
Tabern, D. L. See Volwiler, E. H.

Tabhan, F. See Locsin, C. L.

Tachi, H., and Saito, Shidzuka, significance of the augmented adrenaline secretion after hæmorrhage in dogs in the simultaneous occurrence of hyperglycamia, A., 357. Tachi, H. See also Saito, Shidzuka.

Tachibana, T., enzymes in the fluid of ovarian cysts. I. Amylasc, A., 342.

fœtus. I. Enzymes in the digestive tract; trypsinogen in the pancreas. II. A peptone-splitting enzyme in the intestinal canal. III. Lipase in the stomach, A., 589.

Tacke, B., and Arnd, T., determination of harmful soil acidity, B., 183.

Tadokoro, T., ripening of rice seed and chemical properties of rice of the early-ripening sub-varieties, A., 222.

Tadokoro, T., and Watanabe, S., denaturing of proteins. II., A., 1188.

Tadokoro, T., and Yoshimura, K., proteins of the soya bean, A., 961.

denaturing of proteins. I., A., 1188.

Taelen, J. C. van der, and Société Coloniale Anversoise Société Anonyme, [sand-blast] treatment of copal or similar gums, (P.), B., 444.

Täufel, K., and Bauschinger, C., composition of a rape oil of German origin, B., 332. glycerides of rape oil, B., 332.

Täufel, K., and Rusch, M., influence of the malting process on the fat of barley, A., 961.

indirect analysis of three-component systems, especially of mixtures of fatty acids, B., 564.

saponification value of fats with special reference to barley fat, B., 727.

the fat of barley and of its malting products, B., 946.

Täufel, K. See also Fischler, F.

Tafel, W., recrystallisation of electrolytic copper after hot rolling, B., 820.

Tafel, W., Hanemann, H., and Schneider, Adolf, recrystallisation [of mild steel] after hot-rolling, B., 131.

Taggart, F. D., chilled-roll alloy, (P.), B., 648.

Taimni, I. K., viscosity of supersaturated solutions. II., A.,

Takács, L., secretin. V. Preparation, A., 1111.

Takagi, K. See Shimura, Y.

Takahashi, G., and Yaginuma, T., physico-chemical investigation of amino-acids, A., 141, 1237.

Takahashi, K., surface phenomena of small particles of minerals and flotation, B., 922.

Takahashi, M. See Tomita, M. Takahashi, T., and Clark, L. H., variations in the spectrum of the light emitted by quartz mercury lamps, A., 1207.

Takahashi, Y., interpretation of the continuous spectrum of hydrogen, A., 2.

adsorption of poisons by "adsorbin," kieselguhr, and kaolin, A., 350.

light excitation in the negative glow of a helium discharge, A., 1350.

first spark spectra of zinc and cadmium, A., 1351.

Takamatsu, M., organo-selenium compounds, A., 84.

Takamatsu, T., relation of the composition of glass to its optical constants. III., B., 815.

Takamine, J., jun., and Takamine Ferment Co., manufacture of diastatic composition, (P.), B., 1029.

Takamine, J., jun. See also Takamine Lab., Inc. Takamine, T., and Suga, T., near infra-red spectra of helium and mercury, A., 1116.

absorption of the  $H_a$  line, A., 1205.

Takamine, T. See also Dieke, G. H.

Takamine Ferment Co. See Takamine, J., jun.

Takamine Lab., Inc., and Takamine, J., jun., degumming of silk, (P.), B., 892.

Takamoto, R., and Hirohashi, T., synthesis of tetrahydrofurylpropylamine, A., 72.

Takaoka, H., mercuric oxyeyanide compounds of organic acids and their sterilising action on Gonococcus, A., 725.

Takaoka, S., influence of chemical reagents, especially of metallic salts, on the tyrosinase reaction, A., 957.

Takata, K., electrolytic dissociation of colloidal solutions. I., A., 1379.

Takata, R., vitamin-B content of the polished rice "koji," A., 1344

volatile constituents of "miso," B., 1029.

Takayama, Y., separation of betaine hydrochloride and potassium chloride from waste molasses, (P.), B., 372.

Takeda, Y. See Nagayama, T. Takegami, S., colloidal basic chromic chromate; conditions for formation by cathodic reduction of chromic acid, A., 1151.

Takei, S., rotenone, the active principle of derris root. III. Molecular formula of rotenone, A., 933.

Takei, S., and Koida, M., rotenone, the active constituent of V. Tubaic acid, A., 933. derris root.

Takei, S., and Miyajima, S., rotenone, the active constituent of derris root. IV. Rotenic acid, A., 933.

Takei, T., and Murakami, T., equilibrium diagram of the ironmolybdenum system, A., 884.

Takei, S., and Zaidan Hojin Rikagaku Kenkyujo, producing a liquid insecticide containing effective ingredient of Derris species, (P.), B., 832\*.

Takens, E., phenol ether in fennel oil and star anise oil, B., 910. Taketomi, N., and Miura, K., glucosazone reaction, A., 1426.

Takeuchi, S., pancreatic hormone and mineral metabolism. II. Influence of the pancreatic hormone on the blood constituents, A., 725.

Takeuchi, T., super-dispersion, A., 491.

Takeyama, S., determination of the orientation of crystal axes by X-rays, A., 244.

Taku, A., effect of hormones, parasympathetic drugs, alkaloids, and various salts on the hypoglycæmic action of bile acids, A.,

Tal, A. S., purification of clay by electrophoresis, B., 598. Talbot, B., metallurgical furnaces, (P.), B., 522, 649\*, 900\*. Talbot, J., non-splintering glass sheets or plates, (P.), B., 645.

Talbot-Crosbie, f. B. See Stewart & Co., Ltd., D. Talbott, J. H. See Dennis, H., Dill, D. B., Hochrein, M., and

Hurxthal, L. M. Talmud, D., form of the electrocapillary curves of soap solutions, A., 876.

Talmud, D., flotation and  $p_{\rm H}$ . I. Hydrophobic powders, A.,

orientation of molecules at solid surfaces and the range of action of the orienting forces, A., 1002.

Talu, Q. See Gastaldi, C. Tama, C., rapid analysis in the metal foundry, B., 982.

Tama, M., electric furnace for glowing metal bands by induction currents, (P.), B., 25.

electric annealing furnaces for metals, B., 360.

progress in electric furnaces for non-ferrous metals, B., 823. Tama, M. See also Hirsch Kupfer- & Messing-Werke A.-G. Tamamushi, B., adsorption of the fluorine ion, A., 256.

Tamaru, K., change of sp. gr. of cold-worked iron and steel by tempering, B., 475.

Tamchyna, I. See Feigl, F.

Tamele, K., and Westinghouse Electric & Manufacturing Co., furnace; annealing furnace, (P.), B., 61.

Tamiya, H., metabolism of Aspergillus oryzæ. III., A., 958. dehydrase and glutathione in moulds, A., 958.

influence of carbon monoxide on the metabolism of moulds,

A., 958.

Tamm, I., electro-dynamics of the rotating electron, A., 973.

Tammann, G., "resistance" limits, peaks in conductivity curves,

and X-ray interferences in metallic mixed crystals, A., 492. transformation of supercooled liquids into glasses, A., 649. significance of internal diffusion in the regulation of chemical

equilibria, A., 649. dependence of the number of crystal nuclei on the temperature. A., 986.

fusion curves of some salt hydrates, A., 1137.

effect of cold-working on chemical properties, especially of metals, B., 211.

Tammann, G., and Botschwar, A. A., influence of rate of cooling on the structure of cutectics, A., 388.

Tammann, G., and Dreyer, K. L., recrystallisation of substances

of low m. p. and of ice, A., 1225.

Tammann, G., and Heinzel, A., determination of the solubility

curves of mixed crystals at low concentrations and the segregation of the foreign substance on heating, A., 24.

Tammann, G., Heinzel, A., and Laass, F., sensitivity of methods of detection of impurities in cadmium and copper, A., 43. Tammann, G., and Jellinghaus, W., volume changes in the

softening range of glassy substances, A., 993. Tammann, G., and Jessen, V., diffusion coefficients of gases in

water, and their temperature relationships, A., 501.

Tammann, G., and Kohlhaas, A., determination of the softening interval of glasses and the abnormal change of specific heat and volume over the interval, A., 1138.

Tammann, G., and Rohmann, A., influence of pressure on the electrical conductivity of salt solutions, A., 1240. Tammann, G., and Salge, W., sensitivity of methods of detection

of small quantities of impurities in iron, A., 43.

Tammann, G., and Sworykin, A., determination of cohesion tomperatures [of powders], A., 23. Tammann, G., and Tofaute, W., influence of pressure on the

conductivity of solutions of acids, A., 1240.

Tanaka, H., glycogen of the internal car of the guinea-pig. VI. Changes due to the injection of insulin. VII. Post-mortem changes, A., 1343. glycogen in the central nervous system of some mammals.

III. Effects of inanition, A., 1478.

Tanaka, K., and Shoji, S., tests of fire-resisting reagents for wood, B., 777.

Tanaka, K., Shoji, S., and Funakoshi, N., tests of reagents used for preventing the decay of wood. III., B., 777.

Tanaka, Kenzo, orientation of single crystals of zinc, A., 15. Tanaka, M., and Tanaka, N., condensation of phthalic anhydride with o-dichlorobenzene, A., 186.

Tanaka, M., and Watanabe, S., dehydrating action of Japanese

acid earth in the anthraquinone series, A., 190. Tanaka, N. See Tanaka, M.

Tanaka, S., electrolytic oxidation of methyl alcohol in alkaline solution, A., 276.

Tanaka, Shizuo, and Endo, M., determination of lactic acid in animal fluids and tissues, A., 1114.

Tanaka, Y., and Kobayashi, R., refining of shale oil, B., 931. Tanaka, Y., Kobayashi, R., and Ohno, S., crystallisation of paraffin. I. Crystal forms of paraffin from shale oil. II. Crystal system of paraffin from shale oil. III. Crystal forms and system of petroleum paraffin, B., 118.

Tanaka, Y., and Kuwata, T., occurrence of higher saturated fatty acids in natural petroleum and origin of petroleum, B., 117. Tanaka, Y., and Nagai, Y., vapour pressures of ethyl selenide,

tin tetramethyl, and lead tetramethyl, A., 636.
inflammability of hydrogen. VII. Dew point, density, and range of inflammability of treated hydrogen, A., 654. Tananaev, N. A., detection of alkali metals in mixtures of salts

and in silicates, A., 668, 1257.

Tananaev, N. A., and Pantschenko, G. A., drop method of deteeting molybdenum, A., 1032.

Tanasescu, I., tautomorism of o-nitrobenzaldehyde. II., A., 66. tautomerism of o-nitrobenzaldehyde. III. Action of diazomethane on o-nitrobenzaldehyde, A., 188. Tanberg, R., motion of an electric are in a magnetic field under

low gas pressure, A., 1121.

Tancakivský, K. See Herasymenko, P. Tancov, N. V., internal resistance in instantaneous processes in relation to the entropy changes taking place in them, A., 637.

Tandler, R., manufacture of spinning and weaving fibres [from skins, etc.], (P.), B., 406.
Tandon, H. L. See Ahmadi, M. H.
Tanenbaum, A. L. See Marvel, C. S.

Tangential Dryers, Ltd. Sco Portham, R. S.

Tangl, H., action of choline on gaseous metabolism, A., 468.

Tangl, H., and Than, F., action of secretin on gaseous metabolism, A., 475.

Tanimura, K., cast iron. IV. Influence of melting temperature on low-carbon cast iron, B., 981.

Tanko, B. See Bodnár, J.

Tannahill, R. W., distribution of lead in the body after absorption, A., 1486.

Tanner, C. C. See Gibby, C. W.

Tanner, H. G., mechanical model of an asymmetric carbon atom, A., 750.

Tanret, G. See Pénau, H. Tansley, K. See Lytbgoe, R. J.

Tanzl, B. Sco Azogeno Soc. Anon. per la Fabbr. dell'Ammoniaca Sintetica e Prod. Derivati.

Tao, L. O. See Job, F.
Tapley, M. W. Sco Nitardy, F. W.
Taplin, B. See Taplin, T. J.
Taplin, T. J., [means for excluding air to interior of] rotary furnaces and kilns, (P.), B., 501.

Taplin, T. J., Taplin, B., and Metals Production, Ltd., heat-treatment of oxidised copper ores, (P.), B., 60, 944.

Tapsell, H. J., and Remfry, J., proporties of materials at high temperatures; the "creep" strength of a "high nickel-high chromium steel" between 600° and 800°, B., 475.

Tapsell, H. J. See also Batson, R. G. Tar & Petroleum Process Co. See Knowles, A. S. Taranova, A. See Gavrilov, N. J.

Taranovskaya, V. G., changes produced in plants on emasculation, B., 408.

Tarasenkov, D., determination of sulphuric acid in presence of chromic acid, A., 1029.

Tarassov, B., determination of the composition of petroleum,

Tarján, I., and Túry, P., production of tungsten in rod or powder form from a single crystal, B., 22.

Tark, M. B., and Link-Belt Co., sewage-disposal apparatus, (P.), B., 624.

Tarlton, E. S. See Bird & Co.

Tarr, G. W. See Goodell, A. P.
Tarrant, A. N., developments in kilns for burning refractory materials, B., 682.

Tartakovsky, P., diffraction of electrons, A., 969. Tartar, H. V., Duncan, C. W., Shea, T. F., and Ferrier, IV. K., effect of electrolytes on emulsions, A., 506.

Tartar, H. V., and Lorah, J. R., systems: strontium oxidephosphorus pentoxide-water, and barium oxide-phosphorus pentoxide-water at 25° (acid region), A., 651.

Tartar, H. V. See also Lorah, J. R. "Tasch" Laboratory, Ltd. (Laboratorium "Tasch" Akt.-Ges.), manufacture of organic mercury compounds, (P.), B., 661,

Tasker, C. See King, J. G. Tasman, A. See Jorissen, W. P.

Tate, M. H., production of floor, roof, and wall coverings [of fabric, rubber, and bitumen], (P.), B., 397.

Tate, Jones & Co., Inc. See Knapp, J. H.

Tatsui, G., synthesis of carboline derivatives, A., 74.

Tattersfield, F., and Hobson, R. P., pyrethrin I and II; their insecticidal value and determination in pyrethrum (Chrysanthemum cinerariæfolium). I., B., 488.

pyrethrin I and II; their determination in pyrethrum (Chrysanthemum cinerariæfolium). II., B., 732.

Tatum, W. W. See Imperial Chem. Industries, Ltd.

Tau. S. See Grasser, G.

Taubmann, G. See Hesse, E. Tauman, A. See Fogel, L.

Tausson, V. O., bacterial oxidation of crude oils, A., 1108.

bacterial oxidation of phenanthrene, A., 1341. Tausz, J., and Dreifuss, M., lubricating oils, B., 118.

Tausz, J., and Körösy, F. von, viscosity constants and surface layers, A., 499.

Taveau, R. de M., Tygert, C. B., and Texas Co., manufacture of metallic [aluminium] chloride, (P.), B., 597.

Tawada, K., and Garner, W. E., hydroxyl radical in flames, A., 21.

Taylor, A. M., structure of the AX, group, A., 749. Taylor, A. M. See also Snow, C. P.

Taylor, C. A., and Blaney, H. F., efficient soil-tube jack, B., 571.

Taylor, C. S., and Edwards, J. D., thermo-electric tests for aluminium-manganese and other alloys, B., 899.

Taylor, C. S. See also Edwards, J. D.

Taylor, C. V., and Whitaker, D. M., potentiometric determinations in the protoplasm and cell sap of Nitella, A., 107.

Taylor, E., and Johnstone, H. F., determination of the sulphur content of gases from boiler furnaces, B., 1002.

Taylor, E. A. See Grasselli Chem. Co.
Taylor, E. McKenzie, bearing of base exchange on the genesis of petroleum, A., 168.

replaceable bases in shales and clays overlying petroliferous strata, A., 904.

agricultural value of Nile silt held fallacious, B., 757.

comparison of the conditions of occurrence o ibituminous coal and petroleum, B., 928.

Taylor, E. McKenzie. See also Woodman, R. M.

Taylor, Edith M. See Moloney, P. J.

Taylor, E. R. See Clarke, H. T. Taylor, F. A., and Levene, P. A., oxidation of lignoceric acid, A., 295.

cerebronie acid, A., 1479.

Taylor, F. A. See also Levene, P. A. Taylor, F. H. L. See Young, A. G.

Taylor, G. B., and Du Pont de Nemours & Co., E. I., production of nitrosyl halide [chloride], (P.), B., 682.

Taylor, G. B. See also Bachman, P. W., Du Pont de Nemours &

Co., E. I., and Lenher, S.

Taylor, G. E., effect of fluorine in dairy cattle ration, B., 789. Taylor, G. F., platinising glass and other substances, A., 534. Taylor, H. S., and Hill, D. G., reaction of atomic hydrogen with

hydrocarbons, A., 655.

Taylor, H. S. See also Elgin, J. C.

Taylor, J., chemical interaction of ions and the "clean up" of gases at glass surfaces under the influence of the electric discharge, A., 521.

Taylor, J. See also Heaps, C. W.

Taylor, J. B., magnetic moment of lithium, A., 491.

direct measurement of intensity distribution in molecular

beams, A., 1212.
Taylor, J. K., and England, H. N., soil survey of Block E (Ren-

mark) and Ral Ral (Chaffey) irrigation areas, B., 865.

Taylor, J. L., and Howser, C. L., apparatus for chemically treating natural oils, (P.), B., 669.

Taylor, K. A. Sco Hibbert, H. Taylor, K. F. See Bassett, H. L. Taylor, L. See Cowper-Coles, S. O.

Taylor, (Miss) M., accurate method for the analysis of carbamide, A., 178

Taylor, (Miss) M., and Sawyer, E. W., transference of water and its dependence on concentration in the electrolysis of sodium chloride solutions, A., 1239.

Taylor, M. C., and Mathieson Alkali Works, Inc., composition

for producing hypochlorite solutions, (P.), B., 680. Taylor, M. C. See also George, A., and Guyer, J. A. Taylor, M. D. See Pearce, J. N.

Taylor, M. G. D. See Barkworth, H.
Taylor, N. W., physico-chemical theory of the cause of sweet and bitter taste, A., 347.

Taylor, N. IV., and Bull, H. B., effect of certain cations on the flotation of galena, B., 521.

Taylor, N. W., and Sheard, C., tissue calcification, A., 463.

Taylor, N. W. Sce also Beard, R. F.

Taylor, P. B., voltage-intensity relations of 29 lines of the mercury spectrum, A., 1353.

Taylor, P. S. See Frolich, P. K.

Taylor, P. W., refrigerating apparatus, (P.), B., 155.

Taylor, R. See Morgan, G. T.

Taylor, R. K., laboratory devices; vacuum stirrer, pressure alternator, and a gauge for measuring low pressure of permanent gases in condensable vapours, A., 166.

Taylor, S. See Gen. Engineering Co. (Radeliffe), Ltd.
Taylor, T. C., and Beckmann, C. O., disruption of the corn [maize] starch granule and its relation to the constituent amyloses, A., 299.
Taylor, T. W. J., quinaldinic acid, A., 826.

Taylor, T. W. J., and Price, L. S., action of nitrous acid on amino-compounds. III. Dimethylamine, n-propylamine, and glycine ethyl ester, A., 1283.

Taylor, W., composition for rendering the surfaces of walls and other surfaces and for decorative purposes, (P.), B., 853.

Taylor, William, and Boyer, P., structure of cosium and ammonium sulphates, A., 243.

Taylor, W. C., and Corning Glass Works, decolorising and fining glass, (P.), B., 897.
Taylor, W. C. See also Corning Glass Works.

Taylor, W. F., and Winter, J. E., absorption and excretion of magnesium, A., 720.

Taylor, W. H., structure of sillimanite and mullite, A., 988. Taylor, W. I. See Brit. Celanese, Ltd. Taylor-Wharton Iron & Steel Co. See Hall, J. H.

Tchakirian, A., basic gallium acetate and [ammonium] sulphate and gallium oxalate, A., 1026.

Tchayev, S., impregnation of [fibrous] building materials, (P.), B., 210.

Tchéoufaki. See Grignard, V.

Teague, M. C., and General Rubber Co., adhesive rubber composition, (P.), B., 830.

Teague, M. C., and Naugatuck Chemical Co., manufacture of rubber surfacing on a rigid base, (P.), B., 531. production of rubber articles, (P.), B., 830.

manufacture of rubber compositions, (P.), B., 990.

Tears, C. F., and Universal Oil Products Co., [stream divider for] oil [distillation] apparatus, (P.), B., 10.

Teats, R., and American Smelting & Refining Co., recovery of cadmium [from lead-bearing material], (P.), B., 900.

Technical Research Works, Ltd., and Lush, E. J., hydrogenation of naphthalene, (P.), B., 237.

hydrogenation of pyridine and its homologues, (P.), B., 550. Technicolour Motion Picture Corporation, and Kienninger, J. F., hardened gelatin layers, more especially for imbibition printing, (P.), B., 738.

Techno-Chemical Labs., Ltd. See Testrup, N.

Teegan, J. A. C., use of the thermionic valve in measurements of ionisation currents, A., 902.

Tcel, H. M., purification of extracts containing the growthpromoting principle of the anterior pituitary, A., 1343.

Teel, H. M., and Watkins, O., effect of extracts containing the growth principle of the anterior pituitary on the blood chemistry of dogs, A., 1343.

Teeter, C. E., jun. See Olson, A. R.

Tefft, H. B., and McNamer, H. C., storage battery, (P.), B., 782.

Teichert, K., and Schlag, H., water content of cheese, B., 795. Teichmann, H., greatest speed of photo-electric electrons in the

selective sensitivity range of potassium, A., 736.

Teige, K., nature of Kučera's electrocapillary curve anomalies. A., 402.

Teik, C. L. See Georgi, C. D. V.

Teipel, J., and American Pulverizer Co., pulverising machine. (P.), B., 306.

Tekniska Fabr. Jofur, N. I. Bruzelius, and Wikström, E. G. A., material for the destruction of plant pests, (P.), B., 260.
Telegraph Condenser Co., Ltd., and Cole, W. J., electrolyte con-

denser, (P.), B., 754.

Telephon-Apparat Fabrik E. Zwietusch & Co., G.m.b.H., impregnation material for use in electrical condensers, (P.), B., 527.

Teletov, J., preparation and probable constitution of dermatol, B., 622.

Teletov, J., and Andronikov, (Mmc.) N., determination of manganese and iron by successive titrations with permanganate, A., 1260.

Telfer, S. V., abnormality in the composition of human fat, A., 595.

Tellkamp, B. F. See Brit. Thomson-Houston Co., Ltd. Telnov, S. M. See Prianischnikov, N. D.

Teltschik & Co., E., production of an artificial stone material, (P.), B., 853.

Temnov, V., oil from apricot stones, B., 27.

Temple, G., scattering power of a bare nucleus according to wave mechanics, A., 117.

second-order wave equations of the spinning electron, A., 1125.

Temple, J. W., sodium [hydrogen] malcate: a buffer for the region  $p_{\rm H}$  5·2—6·8, A., 882. Temple, J. W. See also La Mer, V. K. Templeton, J. O., and Electropure Corporation, apparatus for

pasteurisation of milk, (P.), B., 147. pasteurisation of milk, (P.), B., 188.

Tendeloo, H. J. C., influence of mixtures of electrolytes on the viscosity of sols of gum arabic, A., 262.

Tendeloo, H. J. C. See also Kruyt, H. R.
Tengler, J., detergent, (P.), B., 565.
Tennant & Co., Ltd., C. See Hopkirk, F. C.
Tenney, F. G., and Waksman, S. A., composition of natural organic materials and their decomposition in the soil. IV. Nature and rapidity of decomposition of the various organic complexes in different plant materials under aërobie conditions, B., 904.

Teplov, I., blood micro-analysis, A., 207.

Teppema, J. See Goodyear Tire & Rubber Co. Terada, T., "reversal-like" phenomena of the discharge-figures

impressed on photographic plates, B., 872.

Terada, T., Nakaya, U., and Yamamoto, R., form and structure of sparks. V. Long sparks in different gases, A., 483.

form and structure of sparks. VI., A., 1120.

Terada, T., and Yumoto, K., ignition of gas by spark and its dependence on the nature of the spark, A., 146.

Terada, T., Yumoto, K., and Yamamoto, R., ignition of combustible gas with three-part spark, A., 770.

Terano, K., and Shimoyama, H., electrolytic preparation of hydrogen. II., B., 1013. Terashima, S. See Gyotoku, K.

Terechina, V. A. Sco Noskowa, O. J.

Terechov, P., acidity of mannitol, A., 1385.

Terenin, A. See Jakovlev, A.

Terlichowski, F., and Michniewski, S., distribution of phosphorus compounds in soils, with reference to soil-surface formation,

Terlinck, E., sulphuryl chloride and its preparation, B., 128. evaluation of acctic anhydride, B., 1007.

Tern, R., production of ammonium salts, (P.), B., 516. manufacture of sulphur trioxide and sulphuric acid, (P.), B., 556.

Ter-Nedden, W. See Fischer, F. Terni (Società per l'Industria e l'Electricita), alloy steels, (P.), B., 249.

Ternstedt Manufacturing Co., chromium plating, (P.), B., 822. Ternynck, L., desiccation and briquetting of [beet] pulp, B.,

Terpougov, J., oxidation of oil of turpentine, B., 218. Terpstra, P. See Elings, S. B., and Jaeger, F. M. Terpugoff, J., flash-point determination, B., 841.

setting point of some mineral oil mixtures, B., 1039.

Terre Haute Paper Co. See Weston, E. B.

Terrell, C., and Terrell, T., treatment [delustring] of [viscoso] artificial silk, (P.), B., 281.

Terrell, T. See Terrell, C. Terrell, W. G. See Spears, H. D.

Torres, E., reactions and gas-flow in [gas] generators as a basis for their constructional design, B., 155.

heat expenditure in the coking process [for coals], B., 461. Terres, E., and Behrens, H., synthesis of carbamide from ammonia, carbon dioxide, and water from a physico-chemical point of view, A., 141.

Terres, E., and Besecke, W., heat transfer in recuperators, B., 502.

E., and Heinsen, A., Burkheiser ammonium sulphitebisulphite process. III. Oxidation of ammonium sulphite and bisulphite in aqueous solution, B., 1013.

Terrey, H., and Diamond, H., crystal structure of silver subfluoride, A., 16.

Terrey, H., and Wright, C. M., crystal structure of mercury, copper, and copper amalgam, A., 16.

Terroine, E. F., and Danmanville, P., formation of creatine from

proteins [in diet], A., 843.

Terroine, E. F., and Reichert, T., influence of ration of salts on nitrogen retention during growth, A., 843.

Terry, A. G. See Colas Products, Ltd.

Terry, C. E. See Terry, J. T.

Terry, (Miss) E. M. See Gooch, W. T.

Terry, E. W., anti-rust or anti-corrosive preparation, (P.), B.,

Terry, J. B., Halloran, R. A., and Standard Oil Co. of California, production of lubricating oil from petroleum oil, (P.), B., 933. Terry, J. T., and Terry, C. E., [flotation] concentration of oxid-

ised ores, (P.), B., 524. Teruuchi, Y., and Okabe, L., cystine content of proteins, A., 85. Teshima, S. See Shibata, R.

Testa, M., chemical nature of the secretion of the corpus luteum, A., 592.

composition of liquor folliculi, A., 716.

Tester, H. E. See Pidgeon, D. G. Testori, R. See Sensi, G.

Testrup, N., Gram, T., Soderlund, O., and Techno-Cl Laboratories, Ltd., drying apparatus, (P.), B., 496, 626. and Techno-Chemical Teterin, V. See Salkind, J

Tetley & Son, Ltd., J., and Cooper, G., [floating cover-plate for] filter presses, (P.), B., 381.

Tetzner, A., production of building stones, (P.), B., 520.
Teufer, H. See Linde, O.
Teuffert, W. See Braun, J. von.
Teut, E. C. See Hart, E. B.

Tevis, H. See Goldsbrough, R. E.

Tewari, J. D., dyes derived from cinchomeronic acid, A., 1186. Texas Co. See Bogart, G. B., De Florez, L., Gray, G. W., Hall, F. W., MacKenzie, K. G., Manley, R. E., Parrish, W. C., Risdon, F. P., Stratford, W. M., Taveau, R. de M., Vimmig, H., White, G. D., and Wolcott, E. R.

Texas Gulf Sulphur Co. See Kobbé, W. H., and Schwab, J. W. Textiles (New Process), Ltd., and Viallet, J., treatment of jute to obtain a fibre similar to wool, (P.), B., 1010.

Textilwerke Ges.m.b.H., B. G., and Strobl, H., treatment of [fabric] material to render it gas-tight, (P.), B., 50.

Thacher, F. B. See Waggoner, C. L.
Thakur, A. K., and Norris, R. V., biochemical study of some soil fungi with special reference to ammonia production, B., 222. Thaler, G. T. See Harrison, W. N. Thaler, H. See Schmidt, C.

Thalheimer, E, J. See Friedenson, M.

Thaller, R., dosage of cathode-particles from Lenard high-power tubes, A., 114.

direct transition from the independent to the dependent conduction of electricity in strongly ionised gases at high pressures, A., 482.

Thamann, F. See Kekhoe, R. A. Than, F. See Tangl, H.

Thanheiser, G., and Dickens, P., influence of shaking on various precipitation reactions, B., 392.

Thanheiser, G. See also Bardenheuer, P. Thanhauser, S. J. See György, P.

Tharaldsen, F., condenser for zinc vapours from electric furnaces, (P.), B., 603.

Thate, H., relationship between constitution and taste among some derivatives of carbamide, A., 308.

Thater, K. L. See Thiessen, P. A. Thatte, V. N., coefficient of cubical expansion of liquids and critical temperature, A., 754.

Thauss, A. See Grasselli Dyestnff Corporation.

Thayer, J. R., and McElvain, S. M., piperidine derivatives. VI. 3-Methylpiperidinoalkyl benzoates, A., 194.

Thaysen, A. C., Bakes, W. E., and Green, B. M., naturo of the carbohydrates found in the Jerusalem artichoke, A., 856.

Thaysen, A. C., and Galloway, L. D., production of power alcohol from waste vegetable materials, B., 272.

Thaysen, T. E. H., blood-sugar regulation in idiopathic steator-rhea. II. Origin of the low blood-sugar curve, A., 1482.

Theilecker, W. See Meisenheimer, J. Theis, E. R., distribution of lipins in normal and abnormal liver. III. Effect of disease on human liver, A., 841. Theis, E. R., and Lutz, J. A., effect of nitrate oxygen on tannery effluent, B., 874.

Theis, E. R., and Miller, J. M., biochemistry of soaking and liming [of animal skins]. III. Influence of gaseous environment on the soaking of heavy hides, B., 613.

Theis, E. R., and Neville, H. A., hydration of animal skin by the volume-change method, B., 405.

Theis, E. R. See also Chamberlin, D. S.

Theissing, H. See Suhrmann, R.

Thencz, R. A. J. See Ruth-Aldo Co., Inc.
Theobald, F. V., tar distillate trials in Kent and West Sussex in 1928, B., 185.

Theriault, E. J., chemical aspects of stream pollution by phenol, B., 455.

Thermal Engineering Corporation, and Shackelford, O., lehrs [for bottles, etc.], (P.), B., 776.

Thermatomic Carbon Co. See Boardman, C. C., and Uhlinger,

R. H.

Thibaud, J., diffraction of X-rays by ruled gratings; spectrographic function of X-rays and ultra-violet rays, A., 225. concentration and dilatation effect produced by a longitudinal magnetic field on a beam of slow electrons, A., 231.

longitudinal magnetic actions on beams of slow electrons (periodic concentrations and dilatations), A., 231, 1122\*.

possible existence of important exceptions to the selection principle relative to the total quantum number; N-spectrum of thorium, A., 734.

Thiecke, J., Minimax, Akt.-Ges., and Herzog, H., production of compressed gas, (P.), B., 706.

fuels and firelighters, (P.), B., 769.

Thiel, A., change in colour of indicators at boundary surfaces, A., 782.

diphenylamine and diphenylamine-blue, A., 836.

indicators. XVI. Sensitivity and stability of phthaleins and

sulphonephthaleins to alkali, A., 1410.

Thiel, A., and Eckell, J., corrosion. XIII. Dissolution of metals with evolution of hydrogen, "catalytic" effect of foreign metals, and its connexion with the overvoltage series, A., 273\*.

Thiel, A., and Horn, E., dielectric constants of aqueous solutions of methyl-orange, helianthin, and other ampholytes, A., 12. Thiel, A., and Jungfer, L., indicators. XV. Phenolphthalein

and some of its homologues, A., 445.

Thiel, A., and Luckmann, H., corrosion. XIV. Protection against corrosion of iron in steam boilers, B., 359.

Thiel, A., and Springemann, W., indicators. XIII. Solvent errors. (1) Alcohol error with methyl-orange and related azo-indicators. XIV. New source of error in colorimetric measurements; the "light error" of some azo-indicators in presence of organic solvents, A., 41.

Thielepape, E., and Meier, P., correct procedure in sulphitation of thin [sugar] juice. II. Sulphitation, B., 448.

heating of [sugar] thin juice under pressure, B., 789.

Thieme-Wiedtmarckter, C. See Schall, C. Thienemann, H. See I. G. Farbenind. A.-G.

Thierry, E. H., and Grant, F. B., fuel distillation, (P.), B., 769.

Thiers, H., chlorine ions in the blood in chloride retention of nephritis, A., 1101. Thiers, H. See also Savy, P. Thies, H. R., comparison of scorching qualities of accelerators

[for vulcanisation of rubber], B., 28.

Thiessen, G. See Raiford, L. C. Thiessen, P. A., smallest crystal nuclei in highly supersaturated gold solutions, A., 643.

spontaneous formation of nuclei in dilute, highly supersaturated gold solutions, A., 643.

gold hydrosols of graded particle sizes without addition of nuclei, A., 877.

preparation of dichroic gold-gelatin films, A., 1142.

soap gels, B., 136. Thiessen, P. A., and Heumann, J., electrokinetic potential of

gold in very dilute solutions of electrolytes, A., 1003. Thiessen, P. A., and Kandelaky, B., chromium ethoxides: prepar-

ation and properties, A., 1027. hydrated chromic hydroxide free from electrolytic impurities,

A., 1155.

Thiessen, P. A., and Koerner, O., electrolyte-free colloidal ferric oxide, A., 643. ferric ethoxide (preparation and properties), A., 675.

ortho- and pyro-silicic acids, A., 1154.

Thiessen, P. A., and Thater, K. L., pure aluminium orthohydroxide, A., 1026. Thiessen, P. A., Thater, K. L., and Kandelaky, B., coagulation

and particle size, A., 645.

Thiessen, P. A., and Triebel, E., number of nuclei formed during crystallisation of gels, A., 505.

Thiessen, R., and Francis, W., terminology in coal research, B.,

Thiessen, R., and Johnson, R. C., analysis of a peat profile, A., 1418.

Thijssen, W.J. See Coster, D.

Thilenius, R., and Winzer, R., determination of minute amounts of mercury, A., 531.

Thilo, E., methyl ethers of diacetyldioxime, A., 681.

Thile, E. See also Pringsheim, H.

Thiollet, R., and Martin, G., rational classification of the principal accelerators of vulcanisation [of rubber], B., 755.

Thiriet, A., treatment of cellulose, (P.), B., 1010.

Thivolle, L. See Fontes, G.

Tholand, N. K. G., sponge iron, a raw material for electrical steel, B., 646.

Thole, F. B., measurement of detonation in internal-combustion engines, B., 878.

Thole, F. B. See also Stansfield, R.

Thoma, E. See Bek, E. G., Grasselli Dyestuff Corporation, and Hoffa, E.

Thoma, M. F. See I. G. Farbenind. A.-G.

Thomae, E. See Kliegl, A. Thomann, A. See Högler, F.

Thomas, A. W., and Kelly, M. W., hydrolysis of hide powder in saturated sodium chloride solutions at various  $p_{\rm H}$  values, B., 613.

temperature factor in vegetable tannin fixation, B., 613. effect of pretreatment on hydrolysis of hide powder by saturated calcium hydroxide solutions, B., 730.

influence of acids on the fixation of wattle tannin by hide powder, B., 730. "syntan" [synthetic tannin] tannage, B., 755.

Thomas, B., and Elliott, F. J., changes in soil reaction effected by long-continued manuring, B., 258.

Thomas, C. A. Seo Midgley, T., jun.

Thomas, C. L., determination of nickel in steels, B., 1045.

Thomas, C. L. See also Wheeler, A. S.

Thomas, E., manufacture of desiccating material, (P.), B., 207. manufacture of plastic material [from fibres and asphalt, etc.], (P.), B., 280.

manufacture of desiccating material, (P.), B., 814.

Thomas, E. E. See Kelly, W. P.
Thomas, F. See Dunlop Rubber Co., Ltd.
Thomas, G. W., influence of hæmocyanin on distribution of chloride between sea-water and blood of Limulus polyphemus, A., 1094.

Thomas, H. See Pew, A. E., jun.

Thomas, J., and Scottish Dyes, Ltd., production of anthraquinonesulphonic acids, (P.), B., 11\*.

Thomas, J. See also Anderson, I. B., Bangham, P. F., Barnes, R. S., Beckett, E. G., Fairweather, D. A. W., Hereward, H. W., Hooley, L, J, Imp. Chem. Industries, Ltd., Smith, William, Todd, W. M., and Wylam, B.

Thomas, J. A., grouped organisms; action of alkaloids on Con-

voluta Roscoffenis, A., 356.

Thomas, J. C. See Kilborn, L. G.
Thomas, J. E., dried fruit grubs; ethylene dichloride-carbon tetrachloride fumigation process, B., 1029.

Thomas, J. S. See Corson, B. B.

Thomas, L., and Elöd, E., production of fibres from coconuts, (P.), B., 513.

Thomas, Leif, and Marum, E., conductivity measurements in very dilute alcoholic solutions, A., 1239.

Thomas, M. See Gehlhoff, G.
Thomas, M. D., and Abersold, J. N., automatic apparatus for determination of small concentrations of sulphur dioxide in

air. II., B., 282.

Thomas, P., Gradineseu, A., and Imas, (MUc.) R., utilisation of pentoses in the animal organism, A, 467.

Thomas, P., Malevanaia, M., and Imas, (Mile.) R., effect of small doses of phloridzin on the exerction of nitrogen, A., 1336.

Thomas, P., and Sibi, (Mlle.) M., gel structure; gels obtained with salts of quinine, optoquin, and eucupine, A., 1004. Thomas, T. P. See Marden, J. W.

Thomas, W., certain phases of the interrelationship between soil and plant. I. Availability of mineral plant nutrients in relation to degree of dispersion, B., 447.

Thomas, W.A. See Andrews, E. Thomas, W.W., and Davey, N., effect of temperature on the setting times of cements, and on the strength of cements, mortars, and concretes, B., 558.

Thomassen, L., transmutation of elements, A., 117, 374.

crystal structure of some binary compounds of the platinum metals. I. and II., A., 630, 1221. Thompson, A. See Heilbron, I. M.

Thompson, A. F., pulveriser, (P.), B., 740.
Thompson, A. P., and General Chemical Co., production of sulphur, (P.), B., 557.

Thompson, B. M., effect of hydrogen-ion concentration on the voltage of the Leclanché dry cell, B., 24.

Thompson, C. H., manufacture of electrical porcelain insulators, (P.), B., 481.

Thompson, C. H., and McGivern, W. J., emulsions of mixtures

of pitch and bitumen, (P.), B., 769.

Thompson, C. L. See McVay, T. N., and Worthington, L. S.

Thompson, F. C., and Atkin, W. R., dilution method for the colorimetric determination of pn in coloured solutions, A.,

Thompson, F. C. See also Atkin, W. R.

Thompson, G. F. See Macintosh & Co., Ltd., C. Thompson, H. A., filtering or other devices, (P.), B., 499, 1036. Thompson, H. A., and Swinney Bros., Ltd., filtering or other devices, (P.), B., 702\*.

Thompson, H. C. See Brit. Thomson-Houston Co., Ltd.
Thompson, H. E., and Carbide & Carbon Chemical Corporation,

manufacture of natural gasoline, (P.), B., 547. Thompson, H. E. See also Swanson, E. E.Thompson, H. W., and Hinshelwood, C. N., mechanism of the homogeneous combination of hydrogen and oxygen, A., 403.

influence of nitrogen peroxide on the combination of hydrogen and oxygen, A., 657. kinetics of the oxidation of ethylene, A., 1243.

Thompson, J. G., pure carbon monoxide for experimental purposes,

Thompson, J. H. See Vincent, S.

Thompson, L. F., apparatus for heating liquids, (P.), B., 343. Thompson, L. R., and Brundage, D. K., respiratory diseases in a Portland cement plant, B., 941.

Thompson, M. B. See Gray, H. H.

Thompson, M. de K., and Atkinson, R. B., electrical conductivities

of ammonia-water mixtures between 26 and 82% ammonia and from  $-30^{\circ}$  to  $+30^{\circ}$ , A., 1239.

Thompson, N. J., spontaneous heating of [vegetable] oils, B., 62.

auto-ignition temperatures of flammable liquids, B., 311.

Thompson, P. F., rapid determination of lead, B., 943.

Thompson, P. K. See Thompson, W. O.

Thompson, R. A., and Kipping, F. S., organic derivatives of silicon.

XXXIX. Action of sodium on phenoxychlorosilicanes, A., 947.

Thompson, S. P. See Driver, J. E. Thompson, T. G., and Miller, R. C., differences in the condition of sea-water at the margins of two opposing tidal currents, A., 1035.

Thompson, T. G. See also Blalock, P., and Hitchings, G. H.

Thompson, T. R. See Bingham, E. C.
Thompson, W. O., Thompson, P. K., Silveus, E., and Dailey,
M. E., cerebrospinal fluid in myxædema, A., 1331.

Thompson Products, Inc., [nickel-chromium] alloy steel and articles made therefrom, (P.), B., 23.

Thompson Products, Inc. See also Bissell, R. E.

Thomson, E. See General Electric Co. Thomson, G. See Patterson, T. S.

Thomson, G. M., production of cellular building material, (P.), B., 325.

production of dense foam [for cellular building materials, etc.], B., 420.

cellular heat- and sound-insulating material, (P.), B., 434. mixing of quick-setting cementitious materials, (P.), B., 646\* Thomson, G. P., waves associated with  $\beta$ -rays and the relation between free electrons and their waves, A., 372.

crystal structure of nickel films, A., 869. diffraction of cathode rays. 111., A., 1209.

Thomson, H. G., effect of particle size of zinc oxide on the consistency of glaze slips, B., 918.

Thomson, J., ionisation of hydrogen by its own radiations, A.,

Thomson, (Sir) J. J., electronic waves and electrons, A., 231. relation between the cathode fall of potential, the length of the dark space, and the current in the electric discharge through gases, A., 1356.

Thomson, P., mixer and conveyor, (P.), B., 1036.

Thomson, R. F. See Anderson, I. B. Thomson, W. T. See Smith, F. E.

Thon, N., electromotive potential and electrokinetic potential of graphite [and other elements], A., 385.

Thor, C. J. See Traub, H. P.

Thorn, I. See Deutsch, L. Thorn, V. M. See Moore, T. S.

Thorne, C. B., production of wood pulp, (P.), B., 203. Thorne, P. C. L., and Smith, C. G., calcium acetate gels. I., A.,

Thorneycroit, W. E. See Friend, J. A. N. Thornhill, E. B., and Thornhill-Anderson Co., furnace for treatment of materials, (P.), B., 495. Thornhill-Anderson Co. Sec Thornhill, E. B.

Thornley, S. See Baddiley, J.
Thornton, H. G., effect of fresh straw on the growth of certain

legumes, B., 906.

Thornton, J. E., production of non-splinterable or safety glass, (P.), B., 357.

production of relief images upon sensitised, continuous filmstrips which have been exposed or printed, (P.), B., 539. [registering devices for] production of [multi-colour] kinematograph film positives, (P.), B., 961.

[registering devices for] manufacture of two colour kinemato-graph positive films, (P.), B., 961.

Thornton, W. M., electric lamp for use in mines, (P.), B., 859\*. Thorœus, R., radioactive mineral deposits, and the present output of radium, A., 1418.

Thorpe, M. A. See Ullmann, H. M.
Thorpe, W. H., elimination of carbon dioxide in insects, A., 950.
Thorssell, C. T. See Kali-Ind. A.-G.

Thorvaldson, T., Brown, W. G., and Peaker, C. R., thermochemistry of the compounds in the system CaO-Al<sub>2</sub>O<sub>3</sub>SiO<sub>2</sub>. I. Heat of dissolution of calcium oxide in hydrochloric acid, A., 1387.

Thorvaldson, T., and Shelton, G. R., steam-curing of Portland cement mortars; a new crystalline substance, B., 852.

Thorvaldson, T., and Vigiusson, V. A., action of water on tricalcium silicate and  $\beta$ -dicalcium silicate, B., 247.

Threlfall, (Sir) R., electrolysis of molten zinc chloride, B., 775.

Thrun, W. E., soluble lakes of aurintricarboxylic acid, A., 1011.

Thrun, W. E. See also Winter, O. B.

Thrupp, T. C., plugging substance in the vessels of hops, A., 107. Thuau, U. J., wear-resistance of sole leather, B., 141.
wear-resistance of sole leather compared with that of leather

substitutes, and methods of increasing it, B., 925.

Thurmer, A., determination and separation [of sodium and potassium], A., 163.

Thunberg, T., enzymic oxidation of oxalic acid by seeds; constitution of oxalic acid, A., 98.

occurrence of a citric-dehydrogenase in cucumber seeds and its application to a sensitive biological colour reaction for citric acid, A., 602.

Thurkauf, O. See Volmar, Y.

Thurm, A. See Spengler, O.

Thurman, E. N. See Whitmore, F. C. Thurmann, B. H., and Crandall, W. R., film characteristics of the esters of the component fatty acids of linseed oil, B., 102.

Thurnwald, H., quantitative emission spectrum analysis. II. Determination of zine in solution and of molybdenum in steel by the comparison method, A., 530.

Thurnwald, H., and Hüttig, G. F., quantitative emission spectrum

analysis. I. Principles of quantitative spectrum analysis, A., 413.

Tian, A., equilibria between acids and bases in a gaseous phase; volatility product of salts; applications, A., 642.
heat of solidification and heat of dissolution of sucrose, A.,

solidification of sucrose; catalysis by water, A., 1045. graduated burette with calibrated globe attached for accurate volumetry, A., 1261.

Tibell, W., and Ahlfeldt, G., determination of moisture in smokeless powder, B., 539.

Tichomirova, A. M. See Efremov, N. N.

Tichonov, A., determination of fats, B., 26. Tiede, E., and Goldschmidt, F., phosphorescence of beryllium sulphide and a luminescent-analytical arrangement particularly

for feebly phosphorescent preparations, A., 626.

Tiessens, G. J., trichloro and high chloro-phenols and their electrical conductivity in water, A., 1173. Tietze, W. See Kopfermann, H.

Tiffeneau, M., and Levy, (MUc.) J., isomerisation of phenylglycidic and phenylhydroxyglycidic esters, A., 1069. Tiffeneau, M. See also McKenzie, A.

Tijmstra, S., and Roxana Petroleum Corporation, refining of

[petroleum] oils, (P.), B., 10.
Tilitschéev, M. D., and Dumski, A. I., preparation of contact substances from the solar oils of Grozni, B., 6.

determination of aromatic hydrocarbons in gasolines produced by straight distillation, B., 879.

Tilitscheev, M. D. See also Sachanov, A. N.

Tilk, W. See Klemm, W. Tilley, C. E., larnite (calcium orthosilicate, a new mineral) and associated minerals from a limestone contact-zone in Co. Antrim, A., 787.

Tilley, F. W., and Schaffer, J. M., chemical constitution and

germicidal activity of amines, ketones, and aldehydes, A., 608. Tillmans, J., Hirsch, Paul, and Reinshagen, E., use of 2:6-dichlorophenol-indophenol as reduction indicator in the examination of foodstuffs, B., 301.

Tillmans, J., Hirsch, Paul, and Schilling, K., adsorption of carbon dioxide by ferric hydroxide, A., 257.

spontaneous formation of a protective layer in iron pipes by cold water. I. Adsorption of carbon dioxide by ferric hydroxide, B., 266.

Tillmans, J., Holl, H., and Jariwala, L., a new carbohydrate in rye flour and the detection of rye flour in wheaten and other flours thereby, B., 70.

Tillmans, J, and Hollatz, G, behaviour of nutrients and foodstuffs at high oxidation potentials, B., 926. Tilman, G. See Overhoff, J.

Timar, E., sulphur content of the hæmoglobin in the blood of pure bred dogs and of some other animals, A., 206.

Timmermans, J., theory of concentrated solutions. VI. Applic-

ation of thermal analysis to the determination of the f. p. curves of binary mixtures of organic compounds of low m. p., A., 254.

properties of some very dry organic substances, A., 991. determination of relationship of stereochemical structure existing between optical antipodes of different substances, A., 1165.

Timpe, O. See Ackermann, D.

Tingle, A., production of fibre, (P.), B., 638.

Tinker, J. M., Gubelmann, I., and Newport Co., manufacture of o-acylbenzoic acid compounds, (P.), B., 889.

Tinker, M., and Saidenberg, A., connexion between sodium chloride elimination and insulin administration in diabetes, A., 344.

Tintometer, Ltd. See Rosenheim, O. Tipler, A. F. See Partington, J. R. Tisdall, F. F. See Courtney, A. M.

Tissier, M., and Bénard, H., colorimetric micro-determination of uranium salts, A., 785. Titani, T., viscosity of liquids above their b. p., A., 637.

viscosity of vapours of organic compounds, A., 993.

Titanium, Ltd., production of alkaline-earth titanates [for use as pigments, etc.], (P.), B., 432.

Titanium Alloy Manutacturing Co. See Kinzie, C. J. Titanium Pigment Co., Inc., and Washburn, W. F., recovery of titanium compounds, (P.), B., 597.

Titanium Pigment Co., Inc. See also Barton, L. E., and Ryan, L. W. Titeica, R. See Duclaux, J. Titov, N. G. See Stadnikov, G. L.

Titov, V. S. See Volkova, Z. V.

Titsch, H. See Suida, H.

Titus, P., and Willetts, E. W., fluctuations in blood-sugar during eclampsia. III. Relationship between plasma-sugar and corpuscular sugar variations, A., 1482. Titus, R. W., and Cave, H. W., manganese as a factor in hæmo-

globin formation, A., 836. Titus, R. W., Cave, H. W., Hughes, J. S. [with Keil, H. L.], manganesc-copper-iron complex in hamoglobin formation, A., 206.

Titus, R. W., and Hughes, J. S., storage of manganese and copper in the animal body; influence on hamoglobin formation, A.,

Titze, W., adherence of thin sheets [of iron during hot-rolling], B., 600.

Tiukov, D. See Chrzaszcz, T.

Tiulin, A. T., relationship between stability of soil structure and its colloid and sand content, B., 184.

soil structure. I. Dependence of stability of soil structure on adsorptive complex and silt. II. Aggregate analysis as a method for determining real soil structure, B., 508. composition of absorbing soil complex, B., 569.

Tiulin, A. T., and Woshutskaja, manurial effects of phosphorites

on podsol soils, B., 758.

Tixier, G., spectrographic determination of the activation of ergosterol by ultra-violet light, A., 359.

Tixier, L., determination of amino-acids in urine, A., 840. Tobata Imono Kabushiki Kaisha. See Kikuta, T.

Tobler, F., influence of potassium on the structure of fibre cell-walls in fibre plants, B., 488.

Tocco, L., Landi, M., and Four Chlmique Rotatif Société Anonyme, rotary chemical furnace, (P.), B., 741\*.

Toch, M., and Standard Varnish Work, anti-corrosive [varnish] material, (P.), B., 444.

Todd, A. R. Seo Patterson, T. S.

Todd, E.W., removal of sulphur from illuminating gas by activated carbon, B., 194.

Todd, J. H. Seo Simmonds, A. E.

Todd, J. P., and Smith, (Miss) H. M., bacterial content of certain medicaments, B., 536.

Todd, P. H., [medicated] soap, (P.), B., 988.
Todd, S. P. See Hitchings, G. H.
Todd, W. M., Wilson, J. S., Thomas, J., and Scottish Dyes, Ltd., preparation of [benzanthrone] dyes, and dyeing and printing of textile fibres, etc., (P.), B., 710.

Todd Dry Dock Engineering & Repair Corporation, [boiler] furnaces adapted for burning pulverised solid and liquid fuel,

(P.), B., 314.

Todd Oil Burners, Ltd., and Clark, E., liquid fuel oil burners, (P.), B., 707.

Todenhöfer, K. See Wienhaus, H.

Todesco, G., use of photo-electric cells for polarimetric measurements, A., 1262. Todesco, G. Seo also Majorana, Q.

Tödt, F., corrosion and residual current. I. Significance of the residual current in the dissolution of metals. II. Significance of the residual current in the deposition of metals, A., 145.

corrosion and residual current. III., A., 270. Tödt, F. See also Spengler, O.

Toeldte, W. See Wolff, Hans, and Zeidler, G.

Töpelmann, H., amphoteric character of lead oxide and peroxide, A., 649.

rapid electrolytic determination of lead as peroxide, A., 669. Török, P. See Oehme, C. Totaute, W. See Tammann, G.

Togino, S., and Yamaguchi, Keiji, study of annealing of metals by a new sensitive differential dilatometer, B., 211.
Togino, S. See also Yamaguchi, Keiji.

Tognola, E., preparation of crystalline lead iodide, B., 812. Tohlin, T., centrifugal separator [for sewage, etc.], (P.), B., 839. Tokmanov, V., treatment of montan wax without acid, B., 463. treatment of bitumens with "sulphosil," B., 743.

Tokody, L., crystal structure of chromite from Tiszafa, A., 18.

structure of rutile, A., 19.

Tokué, K., peroxidase reaction. XXIV. Simultaneous application of the oxidase and peroxidase reactions on leucocytes, A., 1189.

Tokumitsu, Y., interrelationship between hormones and immuno bodies, A., 850.

Tokunaga, H., content of complement compounds in dialysed guinea-pig serum; content of complement compounds in the fractions obtained by precipitation with ammonium sulphate; content of complement compounds in guinea-pig serum fractionated by passing carbon dioxide through it; action of alcohol on the complement of guinea-pig serum, A., 1328.

Tolhurst Machine Works, Inc. See Bryson, T. A. Tolkatshevskaia, N., extractive substances of muscle. XXVIII. Extractive substances of hen's flesh, A., 1479.

Tolkatschevskaia, N. Sec also Kaplanski, S.

Tollert, H., photographic effects [with silver bromide emulsions], A., 522.

Tolman, C. P., cracking of hydrocarbons, (P.), B., 10\*.

Tolman, R. C., De Baufre, W. L., Davis, J. W., Roberts, M. H., and Allen, S. G., separation [of gases] by liquefaction, (P.),

Tolman, R. C., Yost, D. M., and Dickinson, R. C., molecular diameters in gas reactions, A., 381.

Tolman, R. C. See also Ramsperger, H. C., and Ure, W.

Tolstoi, E., exclusive meat diet; effect on carbohydrate tolerance; effect on blood constituents, A., 1334.

Tolstoi, E. See also Lieb, C.  $\hat{W}$ .

Tolstouhov, A. V., differentiation of bacteria by means of a mixture of acid and basic dyes at different  $p_{\rm H}$  values, A., 1110. Tomazo, N. Sco Samec, M.

Tomeo, M., enrichment of poor gums, B., 609.

Tomiček, O., argentometric studies. I. Potentiometric titration of iodides, A., 1158.

behaviour of some colloidal silver preparations in aqueous solution, B., 956. Tomihisa, R. See Kita, G.

Tominaga, K., and Hayashi, I., relationship between chemical constitution and pharmacological action of local anæsthetics. I. Novocaine, tutocaine, cocaine, and psicaine, A., 96.

Tomita, K., vitamin-C. IV. Carbohydrate and nitrogen metabolism of experimental scurvy in guinea-pigs fed on an exclusive oat diet, A., 1111.

Tomita, M., and Takahashi, M., embryochemical investigations with the injection method. I. Uric acid formation in the hen's embryo, A., 1334.

Tomkeiev, S. I., petrology of the Whin sill, A., 788.

Tomkins, R. G., growth of moulds. I., A., 1492.

Tomlinson, G. A., molecular theory of friction, A., 1137.

Tomlinson, G. H., cooking of sulphite pulp, (P), B., 242. Tomlinsons (Rochdale), Ltd., and Smith, E. W., apparatus for

drying and handling grain, etc., (P.), B., 2.

Tommasi, G., essential oils of Magnolia grawdiflora, L., B., 622.

Tomoda, Y., production of glycerol by fermentation. VI.

Influence of sugar concentration on the yield, B., 337. simple method for the determination of acetaldchyde, B., 510. determination of alcohol in the presence of acetaldehyde, B., 510.

Toniolo, C., manufacture of ammonium nitrate in water solution and simultaneous concentration thereof, (P.), B., 283\*

drying process for ammonium nitrate solutions, (P.), B., 776\*. Toniolo, C. Sce also Azogeno Soc. Anon. per la Fabbr. dell'Ammoniaca Sintetica e Prod. Derivati.

Tonks, L., and Langmuir, I., oscillations in ionised gases, A., 367,

general theory of the plasma of an arc, A., 1359.

Tonomura, T. See Mitsukuri, S. Toole, F. J. See Steacie, E. W. R. Toop, F. H. See Macintosh & Co., Ltd., C.

Tootal, S. M., dyes [for acctato silk for domestic use], (P.),

Tootal Broadhurst Lee Co., Foulds, R. P., and Marsh, J. T., production of [non-creasing] cellulosic fabric, (P.), B., 352.

Tootal Broadhurst Lee Co., Ltd. See also Lord, S. S.

Toporov, S. See Schilov, N.

Topping, J., form and potential energy of the isomorphous crystals ruby  $(Al_2O_3)$  and hamatite  $(Fe_2O_3)$ , A., 247.

Torii & Co., Ltd., and Mori, H., production of chyle and manu-

facture of a medicament therefrom, (P.), B., 37.

Tornau, O., and Meyer, Konrad, the "effect-law" of growth factors, B., 447.

Tornow, M., effecting reactions under pressure, (P.), B., 4. Torrance, E. G. See Karr, W. G.

Torrance, J. R., mill for fine grinding [for paints, etc.], (P.), B., 566\*.

Torrance, J. R. See also Cox, H. E.

Torres, M. See Ponzio, G.

Torrey, B., jun., Sanford, G. R., and Semet-Solvay Co., separation of liquids [hydrocarbon oils] having different b. p., (P.), B., 744.
Torrigiani, C. A., differentiating chemico-biological characteristics in the nasal mucus in healthy subjects and those with nasal absccss, A., 594.

Torrisi, D. See Minunni, G.

Torulf, H. C., machines for kneading, crushing, mixing, etc., (P.), B., 543.

Toscani, V. A., iodometric determination of dextrose, A., 948.

Toscani,  $V.\ A.$  See also McClellan,  $W.\ S.$  Toscano, C., behaviour of the combined sugar during alimentary hyperglycæmia, A., 596.

biological characteristic of bound sugar; fasting dogs, A., 609.

Toshimura, K. See Tadokoro, T.

Tosonotti, A. See Garino, M.

Toth, A., examination of sera of mountain-dwellers by electrodialysis, A., 88.

Toto Co., Ltd., Buchanan, J. L., and Schotz, S. P., utilisation of

rubber latex, (P.), B., 828.
Tottingham, W. E. Sce Appleman, C. O.

Totzek, F., and Koppers A.-G., H., coke ovens, (P.), B., 967.

Touchon, J. M. A., preparation of aqueous emulsions or dispersions of rubber, gutta-percha, balata, or similar materials, (P.), B., 256. Toul, F. See Křepelka, *H*.

Tourkowskaja, (Mlle.). See Rodionov, V. M.

Tourne, C., incandescence electric lamps and the like [with replaceable filaments], (P.), B., 689.

Tousehkof-Vtorov, N. A., determination of the colouring power of sulphide dyes, B., 845.

Toussaint, R., errors and illusions in comparison of colours, B., 542.

Tovarov, V. V. See Saslavsky, J. J. Tower, O. F. See Dans, (Miss) W.

Tower Manufacturing Co. See Merrill, H.

Towle, E. C., and Merrill, E. C., the Rosenheim-Drummond colour tests of vitamin-A in cod-liver oil, A., 726.

Town, G. G., errors in the Clark method for determining hardness [in water], B., 1034.

Towne, W. M., and Bliss Co., E. W., working of zinc, (P.), B., 134. Townend, R. V., measurement of osmotic pressure, A., 134. Townley, J. E. Sec Friend, J. A. N.

Townsend, A. J. See Naugle, H. M. Townsend, C. See Governor & Company of Adventurers of Eng-

land Trading into Hudson's Bay. Townsend, J. S., and MacCallum, S. P., ionisation by collision in

monatomic gases, A., 969.

Townsend, J. S., and Nethercot, W., high-frequency discharges in

gases, A., 482.

Toy, F. C., some optical properties of paints and pigments, B.,

947.

mechanism of latent image formation, B., 960. Toy, F. C., and Harrison, G. B., primary process in the formation

of the latent photographic image, A., 660.

Toyama, Y., and Tsuchiya, T., highly unsaturated acids of sardine oil. I. New acid,  $C_{16}H_{26}O_2$ , and the highly unsaturated C, acids, A., 793.

[catalytic] hydrogenation of highly unsaturated acids. II. Course of hydrogenation of methyl esters of highly unsaturated acids with a platinum catalyst, B., 291.

polymerisation of highly unsaturated [fatty] acids. Toyer, R., manure and insect-destroying composition, (P.), B., 223. Toyota, S. See Funaoka, S.

Trachtenberg,  $F.\ I.$  See Brodsky,  $A.\ E.$  Trachtenberg, M. See Homatra, Ltd.

Traegel, A. See Spengler, O. Traill, R. J., and McClelland, W. R., reports of investigations; [Canadian] hydrometallurgical laboratory; [ferric chloride leaching of ilmenite and copper pyrites], B., 132. metallisation of the oxide of iron in ilmenite, B., 646.

Traill, R. J., McClelland, W. R., and Johnston, J. D., reports of investigations: [Canadian] bydrometallurgical laboratory; [hydrometallurgical treatment of high-grade iron-copper

sulphide concentrates], B., 819.

Trainor, T. R., and Kelly, J. A., treatment of benzene to eliminate corrosive properties, (P.), B., 706.

Trakas, V. Sco Haller, V.

Tramm, H., apparatus for benzol determination by the active

carbon process, B., 311.

Tratzki, N. See Shorigin, P.

Traub, H. P., Thor, C. J., Willaman, J. J., and Oliver, R., storage of truck crops; girasole (artichoke), B., 831.

Traube, J., stability of submicrons; disintegration and formation of crystals, and formation of emulsions, A., 263 stability of submicrons; dissolution of crystals and their

formation, A., 1378. Traube, J., and Behren, W. von, stability of submicrons. I. Crystal disruption, crystal formation, and emulsion formation, A., 259.

Traube, J., and Whang, S. H., viscosity constants and surface layers, A., 129.

permeability; viscosity and interfacial surface tension, A., 361. Traube, W., and Gorniak, K., preparation of salts of methylguanidine stable in air, A., 800.

Traube, W., and Hellriegel, E., production of N-monoalkyl derivatives of aminophenols, (P.), B., 236.

Traube, W., and Kuhbier, F., additive compound containing oxygen obtained by the action of ozone on tetramethylammonium hydroxide, A., 685.

Traubenberg, H. R. von, and Gebauer, R., second order Stark effect for H<sub>2</sub>, A., 734. Stark effect in the second order for the Balmer series of hydro-

gen. I. and II., A., 859, 963.

Traubenberg, R. von, optical behaviour of hydrogen atoms in very strong electric fields, A., 224.

Trautmann, O. C., acid-concentrating chamber, (P.), B., 170.

Trautner, W. See Grasselli Dyestuff Corporation.

Trautz, M., multiplicative properties, A., 251. Trautz, M., Acker, H., Broecker, (Frl.) L. E. von, Rick, A., Hoffmann, A., Klippel, H., and Loth, O., sulphur. I. System sulphur-chlorine, A., 525.

Trautz, M., and Badstübner, W., vapour pressure and heat of vaporisation of iron pentacarbonyl, A., 1372.

Trautz, M., and Baumann, P. B., viscosity, heat conductivity, and diffusion in gas mixtures. II. Viscosity of hydrogennitrogen and hydrogen-carbon monoxide mixtures, A., 1227.

Trautz, M., and Gabler, W., ignition pressures of phosphine mixtures, A., 887.

Trautz, M., and Gürsching, M., deviations from Dalton's partial pressure law and their chemical significance, A., 501.

Trautz, M., and Kipphan, K. F., viscosity, heat conductivity, and diffusion in gas mixtures. IV. Viscosity of binary and ternary rare-gas mixtures, A., 1227.

Trautz, M., and Pakschwer, S., the sulphide-sulphate reaction, A., 884.

Trautz, M., and Stauf, F. W., viscosity, heat conductivity, and diffusion in gas mixtures. III. Viscosity of hydrogen-ethylene mixtures, A., 1227.

Travers, A., and Malaprade, new fluoboric acid, A., 38. existence of a new type of fluoborate, A., 38. attempts to isolate new fluoborates, A., 157.

Travers, A., and Nouvel, solubility of magnesium hydroxide at high temperatures, A., 388.

Travers, A., and Schnoutka, existence of monocalcium aluminate in solution, A., 1011.

hydrated polycalcium aluminates, A., 1025.

Travers, J. T., treatment of cannery waste, (P.), B., 536.

Travers, J. T., and Travers-Lewis Process Corporation, treatment of polluted acid wastes, (P.), B., 76.

treatment of sewage and industrial [strawboard] waste, (P.), B., 342.

treatment of sulphite-pulp waste, (P.), B., 391. treatment of polluted waste water, (P.), B., 418.

sewage-treatment plant, (P.), B., 624. treatment of acidified mine water, (P.), B., 662.

purification of polluted liquids and industrial waste, (P.),

B., 662\* Travers-Lewis Process Corporation, purification of polluted liquids,

(P.), B., 662. Travers-Lewis Process Corporation. See also Travers, J. T.

Travis, P. M., mechanical dispersion by means of the colloid

mill, B., 541.

Travis, P. M., and Travis Process Corporation, removal of amorphous wax from petroleum oils, (P.), B.; 1007.

Travis, P.M. See also Halvorsen, A.L. Travis, S., and Callow Rock Lime Co., avoiding dust in hydration of lime and like manufactures, (P.), B., 684.

linings for furnaces, kilns, etc., (P.), B., 701. Travis Process Corporation. See Travis, P. M.

Traxler, J. See Henley's Tyre & Rubber Co., Ltd. Traylor Engineering Co. See Bernhard, R.

Treadwell, W. D., and Eppenberger, W., loosely-bound sulphur in egg-albumin, A., 204.

volumetric determination of protein solutions, A., 204. Trebitsch, B., apparatus for indicating the presence of gases,

(P.), B., 628. Trebitsch, O., production of metallised fabrics, (P.), B., 354.

Treff, W., and Wittrisch, H., ethereal oil extract of German garden pink, B., 737.

Trefilier, I. A., and Razumov, rate of ring-closure of the aδ-diketones, A., 1043.

Treiz, F. See Schlubach, H. H.

Treibs, A., molecular compounds of porphyrins, A., 1467.

Treibs, A., and Wiedemann, E., degradation of chlorophyll by alkali, A., 941.

Treibs, A. See also Fischer, Hans.

Trelaar, L. R. G., intensity distribution of the general and characteristic X-radiation from molybdenum, A., 14.

Treleaven, F. H. See Treleaven, H. W. Treleaven, H. W., treating fabrics resembling wash leather, (P.), B., 406.

Trelles, R. A. See Bado, A. A.

Trendelenburg, P., and Gremels, H., testing ovarian preparations,

Trénel, M., and Bischoff, C., effect of the method of preparation of quinhydrone on its value for analytical work, A., 528.

Trenkamp, H. J. See Küttel, K.

Trent, W. E., and Trent Process Corporation, production of a fuel from pulverised coal, (P.), B., 86.

apparatus for distilling materials, (P.), B., 505.

distillation of solid carbonaceous materials, (P.), B., 505.

gas manufacture, (P.), B., 632.

Trent, W. E. See also Trent Process Corporation.

Trent Process Corporation, and Trent, W. E., heating of finelypulverised coal, (P.), B., 44.

carbonising and gasifying pulverised coal and treating ores, (P.), B., 160.

generating gases for power development, (P.), B., 196 acceleration of flowing characteristics of coal, (P.), B., 311. dissolution of coal, (P.), B., 424.

treatment of carbonaceous material for fuel, (P.), B., 968.

Trent Process Corporation. See also Trent, W. E.

Treschow, C. See Blom, J. Tressler, D. K., and Larrowe Construction Co., preparation of betaine hydrochloride, etc. [and glutamic acid from residual liquors of the beet-sugar industry], (P.), B., 224\*.

Tretjakov, V., general dilution law and mechanism of electrolytic

dissociation, A., 1008.

Tretow, W., drying apparatus, (P.), B., 800.

Treusch, A., Würtenberger, R., and Mayer & Sohn, J., recovery of chromium [as chromate] from chromiferous waste materials [chrome leather scrap, etc.], (P.), B., 208\*.

Trevan, J. W., Boock, E., Burn, J. H., and Gaddum, J. H.,

pharmacological assay of digitalis, B., 112.

Trevan, J. W. See also Culhane, K. Trevaskis, H. See Dunlop Rubber Co., Ltd.

Trevethick, A., Robinson, B. B., and Snyder, R. M., flax retting. I. Aërobic spore-bearing bacteria isolated from retted flax fibre. II. Pure culture flax retting. III. Acidity in retting flax, B., 638.

Trevithiek, H. P., and Lauro, M. F., solubility tests of castor oil, B., 528.

Trewendt, G. See Ullmann, F. Trice, M. F., chlorination of deep well supply for taste and odour removal, B., 341.

Trickey, J. P., and Quaker Oats Co., lacquer solvent, (P.), B., 566.

Triebel, E. See Thiessen, P. A. Trifonov, A., rôle of the walls of the vessel in the photochemical

reaction  $H_2+Cl_2$ , A., 776. hydro-chemistry of the upper Kama and its tributaries, A.,

1263. Trillat, J. J., orientation of organic compounds by cylindrical glass surfaces and superficial orientation of glass; applications, A., 391.

X-ray study of surface or interfacial orientations by the tangential drop method, A., 630.

orientation and pseudo-crystallisation phenomena resulting from the action of stretching in colloidal gels, A., 763.

structural changes produced in colloidal films by stretching, A., 1378.

Trillat, J. J. See also Damianovitch, H., and Dubrisay, R. Trimarchi, G. See Ciacco, C.

Trimble, H. C., and Maddock, S. J., variations of capillary bloodsugar in normal young men during the 24 hrs.; effect of sleep and of mild exercise, A., 588.

Trimble, H. M., coalescence of an unfilterable precipitate of barium sulphate, A., 760.

Trimble, H. M., and Frazer, G. E., solubility of ethylene glycol, A., 1375.

Trimble, H. M. Sec also Remington, V. H.

Trincao, C. See Cascao de Anciaes, J. H.

Trip, L. See Hüttig, G. F

Trissler, A. See Meber, P. W.

Trist, A. R., printing ink, (P.), B., 365.

Tritton, F. J., method of increasing the printing speed of dichromated gelatin, B., 623.

Trivelli, A. P. H., tentative hypothesis of the latent image. II. B., 623.

Trivelli, A. P. H. See also Sheppard, S. E.

Trividic, J., adsorption of iodine, bromine, and some halogen salts by carbon from different organic liquids, A., 389, 1000.

Trobridge, G. W. See Dunlop Rubber Co., Ltd. Trocknungs-Anlagen Ges. m.b.H., drying of long-fibred substances,

such as corn, (P.), B., 226. Trocknungs-, Verschwelungs-, & Vergasungs-Ges. m.b.H., ovens of

the rotary, annular sole type, (P.), B., 8. apparatus for destructive distillation of powdered fuel, (P.),

B., 423. distillation of fine granular bituminous material, (P.), B., 968.

rotary [annular] furnaces, (P.), B., 1000. Tröger, J., alkaloids of angostura bark, A., 707.

Troell, E., acids derived from chlorohydrins with two  $\beta$ -substituents, A., 171.

Troemer, B. See Brintzinger, H.

Troensegaard, N., and Mygind, H. G., detection of pyrrole- and pyridine-ring systems in proteins, A., 1322.

Trogus, C., and Hess, K., X-ray investigations on cellulose derivatives. II. Translation lattice of methylcellulose, A., 1222. Trogus, C. See also Hess, K.

Troizkaja, A.A. See Pamfilov, A.V.

Trojan Powder Co. See Rupp, G. A., Snelling, W. O., and Wyler, J.A.

Tron, E., intraocular fluids. II. Magnesium, sodium, and chlorine in the aqueous and vitreous humours and the blood-serum of the ox. III. Inorganic sulphur and phosphorus, A., 592.

Tronov, B. V., Akivis, A. I., and Orlov, V. N., activity of the

halogens in halogen-substituted esters, A., 1039.

Tronov, B. V., and Grigorieva, A. A., velocity of oxidation of benzoic [and other] acids by potassium permanganate in alkaline solution, A., 1018.

Tronov, B. V., and Lukanin, A. A., effect of neutral salts on the velocity of oxidation of organic compounds by potassium permanganate, A., 1020.

Tronov, B. V., and Nikonova, L. S., velocity of oxidation of amines by potassium permanganate, A., 1018.

Tronstad, L., optical investigation of metallic films rendered active and passive by electrochemical means, A., 1002. optical investigation of the passivity of metals, A., 1150.

various modifications of ammonia, A., 1408.

Troop, R. S., and Wheeler, F., drying of clay, B., 172. Tropsch, H., acids of montan wax, B., 1005.

Tropsch, H., and Koch, H., acids of montan wax. III., B., 463. synthetic benzine from water-gas, B., 1003.

Trost, F. See Costa, D. Trost, J. F. See Hauge, S. M.

Trostel, L. J., and General Refractories Co., manufacture of refractory composition and articles therefrom, (P.), B., 645.

Trostler, F. See Chem. Fabr. Johannisthal G.m.b.H., and Scheibler, H.

Trottier, R. E., crushing, grinding, or milling apparatus, (P.), B., 664.

apparatus for separating minerals or other materials, (P.), B., 964.

Troup, J. D., steam accumulators, (P.), B., 1000.

Trowbridge, M.L. See Brogden, E.M. Trowbridge, P.F. See Griswold, D.J.

Troy Laundry Machinery Co., Inc. See Balzer, F. Truax, T. R., Browne, F. L., and Brouse, D., significance of

mechanical wood-joint tests for the selection of woodworking glues, B., 257.

True, L., apparatus for mixing dry and liquid materials, (P.), B., 39. Trümpler, G., production of palette ["stopping"] materials, (P.), B., 1023.

Trüper, E., lactose-fermenting yeasts in milk, B., 225.

Trumble, M. J., treatment of oil shale, (P.), B., 386. cracking of hydrocarbons, (P.), B., 706.

hydrogenating and cracking organisation [for mineral oils], (P.), B., 842

oil cracking, (P.), B., 881.

Trumbo, A. J. Seo Trumbo, H.

Trumbo, H., Trumbo, A. J., and Manganese Patents Corporation, concentration of manganese ore, (P.), B., 525.

Trumbull, H. L., preparation and properties of aqueous rubber dispersions, B., 1023.

Trumbull, H. L. See also Spear, E. B.

Trumpy, B., broadening of spectral lines, A., 615.

transition probabilities in the lithium atom. III., A., 618.

Truog, E., and Meyer, A. H., improvements in Deniges' colorimetric method for [the determination of] phosphorus and arsenic, A., 1158.

Truscott, S. See Jacobsohn, I. M.

Trushlevitsch, V. I., mechanical separation and flotation of Kourcika's graphite, B., 765.

Trusler, R. B., soaps from organic bases [hydroxyethylamine

soaps], B., 136.

Trusler, R. B., and Roessler & Hasslacher Chemical Co., manufacture of benzonitrile and other aryl cyanides [nitriles], (P.), B.,

Tryller, H., potentiometric determination of [reducing] sugar, B., 223.

Ts'ai, L. S., and Wilson, E. O., smoke tannage; effect of wood smoke on combining capacity of hide substance for chromium trioxide, vegetable tannin, and sodium hydroxide, B., 221. Tsao, T. See Schleede, A.

Tschaeppet, C., manufacture of electrolytic iron free from brittleness, (P.), B., 214.

Tschelincev, V., and Schmidt, W., preparation of a-ketonic acids, A., 1272.

Tschemernigg, L. See Lindner, J. Tschemtke, H. L. See Clark, G. L.

Tscherniaev, I. I., theory of complex compounds. I., A., 1129. Tscherniaev, I. I. See also Tschugaev, L.

Tschernick, G., analysis of a eudialyte from Chibina steppes and its weathering products, A., 45.

betafite from Sludianka, E. Siberia, A., 168.

analyses of echenite; echenite-blomstrandite-priorite series, A., 1036.

Tschernoshukov, N. I., evaluation of the stability of naphtha products as regards coke formation, B., 85.

determination of water in oil fuels, B., 345.

coke formation with fuel oils and lubricating oils, B., 345. determination of oxidisability of transformer and turbine oils, B., 346.

carbonisation of lubricating oils and fuel oils, B., 463. petroleum asphalts and resins, B., 584.

Tschernuchin,  $\hat{A}$ ., essential oils of wild plants of Voronesh Government, B., 537.

Tschernuishev, V., rapid determination of water in fats and glycerin, B., 402.
Tschesche, R. See Slotta, K. H.
Tschesnokov, V. See Kostytschev, S.

Tschirch, A. [with Rosenthal, H., and Friedländer, G.], evaluation of Peru balsam, B., 111.

Tschirch, A., and Schmitz, P., evaluation of rhubarb, B., 111.

Tschirch, A. See also Bolin, A. A. Tschirch, E. See Krüger, D.

Tschirikov, T., adventitious roots and the supply of nitrogenous and mineral substances to oats, B., 488.

Tschitschibabin, A. E., second form of oxalic acid?, A., 48. existence of an isomeride of oxalic acid, A., 1041.

Tschitschibabin, A. E., Kirsanov, A. V., Korelev, A. J., and Voroshcov, N. N., non-tannin substances in the extract of the root of badan (Saxifraga crassifolia). I. Bergenin, A., 574.

Tschitschibabin, A. E., and Schtschukina, M. N., action of ammonia on monobromoacetaldehyde and preparation of pyrazine from the latter substance, A., 686.

Tschitschibabin, A. E., and Stepanov, F. N., picolide of M. Scholtz and acetyl derivatives of indolizine and 2-methylindolizine, A., 704.

Tschmutov, K. See Schilov, N.

Tschopp, E., general apparatus for micro-analysis. I. Ashing in a sealed system, A., 478.

Tschopp, E. See also Calatroni, R.

Tschugaev, L., and Orelkin, B., complex compounds of platinous

chloride with aminoacetal, A., 1157.

Tschugaev, I., and Tscherniaev, I. I., oxidation of complex compounds of platinum. II. Oxidation of persulphate and free oxygen, A., 1157. Tschulkova, S. S. See Smorodincev, J. A.

Tschunkur, E., Eichler, F., and General Aniline Works, Inc., manufacture of [o- and p-]xylenes, (P.), B., 889\*.

Tsitovitsch, B. P., freezing of colloidal liquids, (P.), B., 664.

Tso, E., antiscorbutic vitamin in cabbage soup, cabbage puree, and turnip juice, A., 104.

Tso, E., Yee, M., and Chen, T., nitrogen, calcium, and phosphorus metabolism in infants fed on soya-bean "milk," A., 95.

Tsuboi, S., arrangement of micro-crystals in compressed magnesium and aluminium plates, A., 16.

favourable direction of growth of some metal crystals, A., 1220. fibrous structure in metals deposited through difference in electrolytic solution pressures. II., A., 1247.

Tsuboi, S. See also Yoshida, U. Tsuchida, R. See Shibata, Y. Tsuchiya, T. See Toyama, Y.

Tsuda, S., definite temperatures in gelatinising systems, A., 264. Tsujimoto, M., constitution of clupanodonic acid, A., 294. Iwashi (sardine) acid, A., 793. tetradecenoic acid from Tetradenia glauca, Motsum, A., 839.

Tsujimoto, M., and Kimura, K., fat from the liver of the sperm whale, B., 101.

Tsujimura, M., tea catechin from green tea, A., 934.

Tsunokae, R., deterioration of some silk-scouring soaps on storing, B., 136.

Tsutsui, T., residual thermoelectricity of a mercury filament, A., 391.

Tsutsumi, J., examination of the micro-crystals of calcium carbonate in molluscan shells by means of X-rays. III., A.,

Tsuzuki, Y., triacetylstarch and its mol. wt., A., 175. acetylation of carbohydrates with acetic anhydride and alkali thiocyanates, A., 428.

dissolution and acetylation of starch, A., 1168. Tubandt, C., and Reinhold, H., chemical equilibria between solid salts, A., 401.

Tubandt, C., Reinhold, H., and Jost, W., diffusion in crystalline substances, A., 255.

Tucholski, T. See Kalandyk, S.

Tucker, C. See Popov, S.

Tucker, K. L. See Reinhard, M. C.

Tucker, K. P. See Reinhard, M. C.

Tucker, R. P., sublimation of sulphur between 25° and 50°,

Tucker, W. A. See Groesbeck, E. C., and Rawson, H. S. Tuichinin, B. G., and Pavlova, S. N., Dossor mineral oil, B., 7.

Tukov, D. See Chrzaszez, T. Tulaikov, N. M., oily plants, B., 992.

Tulli, A., chemical examination of a mummy, A., 715.

Tullis, A. F., reversing mechanism for washing and like machines of the rotary-drum type, (P.), B., 629. Tullis, D. R., production of an aluminium alloy, (P.), B., 134.

production of [non-corrosive] aluminium alloy, (P.), B., 984. Tulloch, T. G. See Reading, H. C. Tully, A. V. See Tully, Sons, & Co., Ltd.

Tully, Sons, & Co., Ltd., and Tully, A. V., apparatus for the manufacture of water-gas, (P.), B., 705.
Tummerman, L. A. See Vavilov, S. J.

Tunell, G. See Posnjak, E.

Tunison, B. R., flotation agent, (P.), B., 781.

Tunstall, N. See Barker, S. G.

Tuorila, P., cellulose as source of energy for nitrogen-fixing micro-organisms, A., 473. Turbinator Co., Inc. See Michal, J. A.

Turek, O., production of 2:4:6-trinitro-1:3:5-triazidobenzene, (P.), B., 700.

explosive charges for detonators, percussion caps, boosters,

detonating fuses, projectiles, etc., (P.), B., 700.

Turkington, V. H., and Bakelite Corporation, phenolic resin composition, (P.), B., 444.

Turkington, V. H. See also Redman, L. V.

Turkovskaja, A. See Isgarischev, N.

Turnbow, C. D. See Gray, C. E.

Turnbull, A., determination of insoluble matter in tanning extracts, B., 405.

determination of insoluble matter in tanning extracts, B., 567. Turner, A. H. See Eddy, C. E.

Turner, E. E., reactions and space formula of diphenyl, A., 1170. Turner, E. E. See also Groves, L. G., Gull, H. C., Lesslie, (Miss) M. S., and Mayes, H. A.

Turner, I., gas or vapour burners, (P.), B., 670

Turner, K. R. See Cameron, A. T.

Turner, L. A., ionising potentials and far ultra-violet lines of light atoms, A., 113.

molecular binding and low 5S terms of N+ and carbon, A., 964. Turner, L. A., and Samson, E. W., excitation potential of the negative bands of nitrogen, A., 1212.

dissociation of nitrogen by electron impact, A., 1212.

Turner, L. A. See also Kenty, C., and Russell, H. N. Turner, L. I. See Newitt, F. T.

Turner, P., drying machines, (P.), B., 2.

Turner, P. E., liming as a factor in the amelioration of deteriorated tropical soils, B., 183. lime status of soil in relation to an insect pest of sugar cane,

Turner, R. G. See Roekwood, E. W.

Turner, W. A., and Hartman, A. M., calcium and phosphorus metabolism in dairy cows. III. Adequate ration for high-producing cows and the offect of exercise on calcium, phosphorus, and nitrogen balances, A., 1485.

Turner, W. E. S., physico-chemical phenomena exhibited by minor constituents in glass, B., 355.

reports on glasshouse pots. III., B., 472. Turner, W. E. S. See also Cousen, A., English, S., Green, (Mrs.)G. A., Hodkin, F. W., and Starkie, D.

Turnoek, L. O., electrodeposition, (P.), B., 564.

Turnwald, H., and Haurowitz, F., heavy metals in human liver and their spectrographic detection, A., 591.

Turova-Pollak, M. B. See Zelinski, N. D.

Turrall, G. H., burner for pulverulent fuel, gas, or oil, (P.), B., 88. Turrentine, J. W., recovery of iodine, (P.), B., 776.

Tnrri, G. G. Sco Crossley, J. S.

Turski, J., and Grynwasser, J., structure of dihydroxybenzanthrone obtained from the condensation of alizarin with glycerol and sulphuric acid (G.P. 187,495), A., 449. Tury, P. See Tarjan, I.

Tussenbrock, M. J. van, colour measurement by means of Moll's

extinctionictor, A., 1035.

Tussenbroek, M. J. van. See also Waterman, II. I.

Tutiya, H., catalysis of decomposition of carbon monoxide. I. Iron as catalyst, A., 520.

catalytic decomposition of carbon monoxide. III. Is the socalled X-carbide really formed in the iron catalyst?, A., 1400.

Tutkevitsch, L., micro-determination of free cholesterol in blood, A., 1477.

Tuttle, C. Seo Bourion, F.

Tutton, A. E. H., significance of X-ray analysis of alkali sulphates,

Tuyn, W., disturbance of the superconductivity of thallium by magnetic fields, A., 250.

electrical resistances of some metals below the b. p. of oxygen, A.; 496.

Tuzson, P. Sco Zechmeister, L.

Twells, R., effect of lepidolite in a high-tension electrical porcelain body, B., 55.

Twining, R. H., and Cleveland-Cliffs Iron Co., distillation of wood,

(P.), B., 667. Twiss, D. F. See Dunlep Rubber Co., Ltd.

Twitchell Process Co. Sco Fischer, C., jun., and Peirce, J. O. Twyman, F., and Hilger, Ltd., A., heat-treatment of metal articles, (P.), B., 330\*.

Twyman, F., Smith, C. F., and Hilger, Ltd., A., production of

coloured designs and application thereof to manufacture of woven fabrics, (P.), B., 699.

Twynam, T., production of magnesia from dolomite, (P.), B., 851. Tychovski, A., and Kobel, M., conversion of hexosodiphosphate into lactate under the influence of B. Delbrücki, A., 1109.

Tychovski, A. See also Polak, F. Tyden, H. See Kullgren, C.

Tygert, C. B. See Taveau, R. de M.

Tykač, B., and Streit, J., determination of sulphur in coal by
means of the nephelometer, B., 582.

Tyler, A. G. See Wilkinson, H.

Tyler, A. H., surfacing materials for roadways, pavements, etc., (P.), B., 853.

Tyler, W. F. See Lansing, W. D.

Tyndall, A. M., mobility of gaseous ions, A., 862.

Tyndall, A. M., Grindley, G. C., and Sheppard, P. A., mobility of ions in air. V. Transformation of positive ions at short ages, A., 6.

Tyndall, A. M., Starr, L. H., and Powell, C. F., mobility of ions in air. IV. Investigations by two new methods, A., 5. Tyndall, E. P. T. See Hayem, A. G. Tynlin, A. F. See Bobko, E. V.

U. G. I. Contracting Co. See Fulweiler,  $W.\ H.$ , and Rusby,  $J.\ M.$  U.S.F. Powder Co. See Du Pont,  $F.\ I.$ 

U.S.L. Battery Corporation. See Wilbur, S. P.

Uber, A. See Neber, P. W. Uchida, J. See Marusawa, T.

Uchida, S., a new adiabatic calorimeter, B., 420.

properties of coal for gas producers, B., 462. Uehida, Y., and Ota, Y., emission band spectrum of bromine, A., 118.

Uchida, Y. See also Kimura, M., and Ota, Y. Uchmann, R. See Sigmund, F.

Ucko,  $H_{\cdot \cdot}$ , peroxidase nature of "active" iron, A., 722.

Udylite Process Co. See Young, A. W.

Überrack, K. Sco Högler, F. Ueda, H., derivatives of diketopiperazine; synthesis of o- and

m-tyrosine, A., 75.

Ueda, K., weathering and durability of glass, B., 95. Ueda, Y. See Sawai, I.

Uedinov, M. N., Drozdov, N. S., and Stepanov, N. A., synthesis of thiocarbanilide, B., 806.

Uematsu, T. See Kita, G.
Ueno, S., Yamashita, M., and Ota, Y., nutritive value of hardened oils. II., B., 26.

Ueno, S. See also Arnoldi, W. Ugo, A. See Vlès, F. Uhde, F., synthetic production of ammonia from its elements, (P.), B., 52. synthesis of ammonia, (P.), B., 282.

Uhl, A., apparatus for electrometric titrations, A., 899.

end-point of the titration in Goldenberg's method of tartaric acid determination, A., 949. apparatus for measurement of  $p_{\rm H}$ , B., 756.

Uhl, B. F. See Industrial Spray-Drying Corporation.
Uhlinger, R. H., and Thermatomic Carbon Co., manufacture of carbon black, (P.), B., 667.

apparatus for production of carbon black, (P.), B., 769. Uhlmann, A., production of hydrocarbons from coal and water,

(P.), B., 232. Uhlmann, A., and Uhlmann Kommanditges., A., manufacture of briquettes and production of ceramic ware, (P.), B., 439.

Uhlmann Kommanditges., A. See Uhlmann, A. Ullmann, F., Trewendt, G., and Michael & Co., J., manufacture of arsenic acid, (P.), B., 432.

 Ullmann, F. See also Prétot, M.
 Ullmann, H. M., Chamberlin, D. S., Simmons, C. W., and Thorpe,
 M. A., petroleum wash-oil thickening in the scrubbing of cokeoven gas, B., 462.

Ullmann, R., artificial stone, (P.), B., 209. Ullmo, J., theory of quantum jumps, A., 621.

Ullrich, G., and Krupp Grusonwerk Akt.-Ges., F., wet magnetic separation of ores and other mixtures of materials on drum separators, (P.), B., 216\*. Ullstrand, B. Sco Palmaer, W.

Ulmann, M., benzene model on a basis of the electron theory and the substitution laws, A., 687.

theoretical electronic explanation of organic compounds, especially benzene, A., 744.

Uloth, R., purification of crude benzol by means of sulphur, B., 767.

Ulrich, H., insulin in acromegalic diabetes, A., 954.

Ulrich, J. L., and Shternov, V. A., comparative [toxic] action of hypertonic solutions of chlorates and chlorides of potassium, sodium, calcium, and magnesium, A., 350. action of chlorates, in particular potassium chlorate, on blood

in animals, A., 350. Ulyashchenko, E. P. See Zhadin, V. V.

Ulzer, F. Sce Bernstein, C., and Stein, A. Umanova-Zavadovskaja, E. See Zavadovski, B. Umbach, II. See Krauss, F

Umbrecht, J. See Küster, W.

Umino, S., specific heat of pure iron at high temperatures, A., 991.

Umrath, K., cell- and tissue-potentials, A., 845. potential measurements, A., 858. Underhill, F. P., and Cross, E. G., spleen and calcium metabolism, A., 345. Underhill, F. P., and Petrelli, J., influence of choline on bloodsugar, A., 348. Underhill, F. P. See also Kapsinow, R. Underhill, S. W. F. See Carr, F. H. Underwood, H. W., jun., and Clough, L. A., diphenic acid series. III., A., 444. Underwood, J. E., Cabell, C. A., and National Lime Association, plaster, (P.), B., 396. Underwood, N., pressure-controlled McLeod gauge, A., 1262. Unger, O. See Grasselli Dyestuff Corporation. Ungerer, E., sparingly soluble phosphates of physiological importance to plants, B., 184. exchange reactions of insoluble alkaline-earth phosphates in permutits and clays, B., 730. Union Carbide & Carbon Research Laboratories, Inc. See Lytle, A. R.Union Carbide Sales Co. See Holladay,  $J.\ A.$ Union Chimique Belge, Société Anonyme, production of ammonium sulphate by the treatment with gypsum of an ammoniacal solution used for the scrubbing of gases, (P.), B., 472, 597. treating coke-oven gases and like gases, (P.), B., 842. Union Oil Co. of California. See Dunham, R. A., Funk, I. B., Kalichevsky, V. A., and Merrill, D. R. Union Trust Co. See Cone, M. R. United Alkali Co., Ltd. See Pritchard, D. A. United Gas Improvement Co. See Brady, E.J. United Glass Bottle Manufacturers, Ltd., and Moorshead, W. A., [automatic] heat-control systems for furnaces, etc., (P.), B., 420. United Glass Bottle Manufacturers, Ltd., Moorshead, T. C., and Hurlbut, F. A., lehrs, annealing furnaces, etc., (P.), B., 645. United Products Corporation of America. See Biddle, A. United States. See Barger, W. R., Herrick, H. T., Robinson, R. H., Roger, L. A., and Walton, G. P. United States Gypsum Co. See Ericson, R. United States Industrial Alcohol Co. Sco also Clapp, E. I., and Ricard. E. United States Metals Refining Co., Eppensteiner, W. F., and Green, H. M., casting and rolling copper, (P.), B., 985. United States Metals Refining Co. See also Ogden, D. L. United States Nito Co., Inc. See Hennen, E. C. United States Process Corporation. See Heuser, H. United States Secretary of War. See Hendler, L. United States Smelting Furnace Co. See Jones, A. United Verde Extension Mining Co. See Prince, G. W. United Water Softeners, Ltd., and Higgins, E. B., electrolytic production of sterilising agents, germicides, etc. [e.g., hypochlorites, chloroamines, etc.], and application of such agents, (P.), B., 605. United Water Softeners, Ltd., and Lawrence, H. S., water-softening apparatus, (P.), B., 342. Universal Gypsum & Lime Co. See Hite, C. E.
Universal Oil Products Co. See Alther, J. G., David, A. D., Dubbs, C. P., Egloff, G., Halloran, R. A., Huff, L. C., Mardick, J. R., Morrell, J. C., Pollock, R. T., and Tears, C. F."Universelle" Cigaretten-Maschinen Fabrik, J. C. Muller & Co., destruction of germs in and sterilisation of cigarette tobacco, (P.), B., 189. University of California. See Lipman, C. B.

hydration of phosphoric anhydride, (P.), B., 245\*.

ethyl \$-methyl-ay-dioyanoglutaconates, A., 52. 313. atives, A., 1176. aluminium chloride, A., 1276. Usher, F. L., mechanism of gelatinisation, A., 1143. P.), B., 356. System arsenic trichloride-ethyl ether, A., 512. (P.), B., 131. B., 654. Uno, D. See Haas, M. Uno, Y. See Kusama, T. autolysis of red and white muscle, A., 352. Unsöld, A., effect of collisions on the structure of Fraunhofer lines, A., 1208. spectroscopic determination of the pressure in the calcium chromosphere, A., 1359. 1212. Unthank, G. R. See Green, E. W. Upenski, E. E., microbiology of soils in relation to liming and phosphate applications, B., 410.
Upiohn, L. B., Isaacs, R., and Gustafson, F. G., effects of sera from normal and anamic persons on growth of seedlings, A., 209. Upmark, A., at. wt. of helium, A., 1124. Upson Co., manufacture of wall board, (P.), B., 21. A., 471 Urazovski, S. S., solubilities of inorganic salts, A., 998. Urbain, E., [production of] decolorising carbon, (P.), B., 466\*. Urbain, E., and Urbain Corporation, decolorising carbon, (P.), B., 198\*.

Urbain Corporation, decolorisation of tartaric acid solutions, (P.), B., 244. Urbain Corporation. See also Urbain, E. Urban, F., and Meloche, V. W., refractometric analysis of solutions of pure compounds, A., 162. Urban, H. See Hägglund, E. Urbana Coke Corporation, Parr, S. W., and Layng, T. E., coke and its production, (P.), B., 44. Urbschat, E., determination of organic arsinic acids, A., 478. Urbschat, E. See also Binz, A. Ure, W., and Tolman, R. C., test of the radiation hypothesis of chemical reaction, A., 776. Urey, H. C., Dawsey, L. H., and Rice, F. O., absorption spectrum and decomposition of hydrogen peroxide by light, A., 864. Urk, H. W. van, universal indicator which gives the spectrum colours for a  $p_{\rm H}$  range of 3—11.5, A., 162. detection of "chloramine-T," and its differentiation from hypochlorites, A., 162. detection of iron as an impurity in reagents by the thiocyanate test, A., 164. universal indicator giving spectrum colours for the  $p_{\rm H}$  range 2-12, A., 413. behaviour of salvarsan and neosalvarsan towards aldehydes, A., 585. yatren, a mono-colour, amphoteric indicator, A., 666. Prussian-blue and Turnbull's blue reactions, A., 670. reactions of cantharidin, A., 702. sensitive new reaction for ergotamine, ergotoxin, and ergotinine, and its application to the investigation and colorimetric determination of ergot preparations, A., 832. colours of some newer dyestuffs used in medicine at different hydrogen-ion concentrations, B., 112. p-dimethylamidobenzaldehyde as a reagent for organic medicinal substances, B., 263. nitrobenzaldehyde as reagent for organic medicinal substances, Urquhart, A. R., adsorption hysteresis, A., 1140. mechanism of the adsorption of water by cotton, A., 1140. Urshumski, A. S. See Gerasimov, A. F. Urushibara, Y., identity of the two possible isomeric methyl synthesis of esters of ay-dicyano-β-benzylglutaconic acid, A., Uschakov, M. I., cyclohexanone-2:6-dicarboxylic ester and the mechanism of the reducing action of zine on halogen derivreduction of acetone by magnesium in presence of anhydrous Usines de la Basse-Meuse, Société Anonyme, and Ruppel, O., production of a coloured coating similar to ceramic enamels, Ussanovitsch, M., electrochemistry of ethereal solutions. II. Ussing, P. H., manufacture of heat- and sound-insulating material, Usuelli, F., carbohydrate metabolism of muscular tissue, A., 1483. Utah Metals Flux Co. See Fisher, E. S. Utescher, K., chemical analysis of soils and the molecular ratios. Utevski, A., formation of acetaldehyde from pyruvic acid in the Utkina-Linbovzova, X., and Steppuhn, O., non-specificity of proteolytic organ-enzymes, A., 1338. Utterback, C. L., total radiation from nickel and cobalt, A., Utzino, S., action of proteolytic enzymes on the benzoyl and phthalyl derivatives of polypeptides. I. Action of intestinal erepsin and of yeast protease on phthalylglycylglycine and phthalyldiglycylglycine. II. Action of tissue proteases on benzoyl- and phthalyl-glycylglycine. III. Action of pancreatic proteases on benzoyl- and phthalyl-glycylglycine, dispersoidological investigations on proteins. I. Influence of temperature on the dispersion and coagulation of eggalbumin, A., 507. Uyeda, S. See Shinoda, J. Uyeda, Y. See Senda, N.

Urbain, E. See also L'Air Liquide Soc. Anon. pour l'Étude et

l'Exploit. des Proc. G. Claude.

Uyeda, Yoshisuke, and Mitsuhashi, I., wood chemistry. V. Mechanical and chemical pulps from "ezomatsu" (Picca jezoensis), B., 552.

Uyeda, Yoshisuke, and Morita, T., wood. IV. Chemical composition of pulp woods from North Korea, B., 12.

Uyterhoeven, IV., positive ion currents in the positive column of the glow-discharge in the noble gases, A., 233.

Uzel, R. Sce Svéda, J.

Uzumasa, Y., cathodie luminescence spectra of rare earths extracted from samarskite, ishikawaite, and monazite of Ishikawa, Iwaki Province, A., 1214.

geological age of ishikawaite from Iwaki Province, A., 1264.

Vacha, G. A. See Regeimbal, L. O. Vacuum Oil Co. See Moran, R. C.

Vacuumschmelze Ges.m.b.H. See Rohn, W. Vacuumschmelze Ges.m.b.H., Rohn, W., and Hirsch Kupfer- & Messingwerke Akt.-Ges., production and repair of refractory linings for hearths of metallurgical and other furnaces, (P.), B., 799.

Vaders, E., copper-aluminium alloy, (P.), B., 687\*. Vageler, H., field trials and the examination of soils by the methods of Mitscherlich, Neubauer, and König, B., 865.

Vaglio, V. See Bonino, G. B.

Vágó, P. von, and Magyar, V., absorption refrigerating machines, (P.), B., 802.

Vaidya, B. K., action between copper salts and glycerol, A., 421. Vaidyanathan, V. I., magnetic susceptibility of ozone, A., 120. diamagnetism and structure of ethylene, A., 121.

influence of temperature on the X-ray liquid haloes, A., 746. X-ray diffraction in liquids of the terpene series, A., 751. influence of particle size on diamagnetism, A., 1371.

Vail, N. R. See Boykin, R. O. Valby, E. P., and Lucas, H. J., ionisation constant of p-cyanobenzoic acid, A., 1384. Valdecasas, J. G. See Ochoa, S.

Valder, A., drying of steam or vapours under pressure, (P.), B., 964.

Valdés, L. See Del Fresno, C.

Valdiguié, A., action of Schiff's reagent on pyramidone, B., 111. Vale, F. M., crushing machines having vibrating jaws, (P.), B., 497.

Valensi, G., action of gases on metals. I. Kinetic study of the phenomena, A., 664.

action of gases on metals. II. The systems chromium-nitrogen and manganese-nitrogen, A., 766.

Valentin, F. See Votoček, E. Valentine, R. E. See Ogden, D. L. Valentiner, S., and Becker, G., lattice structure of nickel, A., 1130. structural investigation of Heusler's alloy, A., 1220. Valet, E. C. H., extracting pure cellulose from the bagasse of

sugar cane, (P.), B., 676.

Valet, E. C. H., and Celulosa Hemmer Valet Soc. Anon. Mexico, extraction of pure cellulose from bagasse of sugar cane, (P.),

Valet, E. C. H., and Funk, O., production of artificial silk [from bagasse of sugar cane], (P.), B., 810.
Valiaschko, N., preparation of alcoholic potash solution and a

test for aldehyde in chloroform using potassium hydroxide,

Valkenburgh, H. B. van. See Schlesinger, H. I.

Valko, E., and Weingarten, N., general colloid chemistry. XXIV. Colloid salt conductivity and colloid ion mobility, A., 761.

Vallance, R. H. See Friend, J. A. N.

Vallarta, M. S., quantum theory and special relativity, A., 1125. statistical interpretation of Maxwell's equations, A., 1209.

Valle, G., and Podesta, A., automatic device for effecting rapid tanning of hides or skins, (P.), B., 830.

Valleau, W. D., and Johnson, E. M., tobacco frenching, a nitrogen deficiency disease, B., 222. Valley, G. See Rettger, L. F. Vallez, H. A., filters, (P.), B., 307.

Valmer, M., theory of processes at unpolarisable electrodes, A., 153.

Valouch, M. A., reflexion and absorption of X-rays of large wavelength, A., 1120.

Valtancoli, M., chambers for the fermentation of offal, garbage, and similar manurial matter, (P.), B., 494.

Valtis, J. See Boquet, A.

Vanadium Alloy Steel Co. Sec Gill, J. P.

Vanadium Corporation of America, and Saklatwalla, B. D., vanadium alloys, (P.), B., 781\*.

Vanadium Corporation of America. See also Saklatwalla, B. D. Vanbockstael, L. See Caron, H.

Van der Bruggen, A., polishing preparation for metal and other surfaces and its manufacture, (P.), B., 1020. Van Brunt, C., corrosion; apparent relation of protective film to

microstructure, B., 437.

Van Brunt, C. See also Gen. Electric Co. Vance, J. E. See Foote, H. W. Vancea, P. See Michail, D.

Van Cuyck, O., manufacture of colours or the like capable of being fixed by heat, (P.), B., 948\*.

Vandaveer, F. E., and Gregg, R. C., simplified iodine pentoxide apparatus for determination of carbon monoxide in flue gas, B., 766.

Vandecaveye, S. C., effect of successive generations of yeast on the alcoholic fermentation of cider, B., 34.

Van den Bergh, H. E., blending or mixing, (P.), B., 838.

Vanderbilt Co., Inc., R. T. See Chamberlain, G. D. Vandervell & Co., Ltd., C. A., Paterson, R. C., and Beddous, P. J., pasting of electric accumulator plates, (P.), B., 253.

Vanderwal, R. J. See Gilman, H. Van der Want, D. See Vles, S. I.

Vande Velde, A. J. J., use of carbamide solutions as culture media, A., 1109.

rapid methods for determination of bacteria in milk, B., 263. Van Deventer, H. R., refrigerating apparatus, (P.), B., 344. Van Deventer, H. R., and Grier, J. A., evaporators for refriger-

ating, (P.), B., 545.

Van Dyke, H. B., Bailey, P., and Bucy, P. C., oxytocic substance of cerebrospinal fluid, A., 1191. Van Gelderen, F. M., removal of insulation from insulated wire,

(P.), B., 481. Van Gessel, K. M., oxide cathode [for vacuum tubes], (P.), B.,

Van Gessel, K. M., and Radio Corporation of America, manufacture

of oxide cathodes, (P.), B., 783\*. Vanghelovici, M. See Minovici, S.

Vanick, J. S. See International Nickel Co.

Vanino, L., and Mussgnug, F., hexamethylenetetramine phenylquinolineearboxylate (atophanurotropin), A., 1183.

Vanino, L., and Prem, M., preparation of luminophores, A., 1153. Vanino, L., and Schmid, F., red phosphorescent alkaline-earth

compounds, A., 662. Vannah, H. P., Gosselink, J. G., and Brown Co., impregnation [staining] of wood, (P.), B., 646. Vannah, H. P. See also Arsdel, W. B. van. Van Natta, F. J. See Gomberg, M.

Van Nes, G. E., purification of liquids containing sugar, (P.), B., 907\*

Vannoy, W. G., induced reactions, A., 1396.

Van Royen, H.J., production of pure iron; manufacture of steel, (P.), B., 523.

manufacture of iron and steel insensitive to cold-shortness, blue-shortness, and ageing, (P.), B., 523.

Van Schaack, R. H., jun., [metal rings for] fractionation apparatus, (P.), B., 876.

Van Schaack, R. H., jun., and Van Schaack Bros. Chemical Works, esters of hydrogenated aromatic alcohols, (P.), B., 427. pyroxylin composition, (P.), B., 924.

aryl alkyl esters, (P.), B., 935.

hexyl [a3-dimethylbutyl] esters, (P.), B., 935. Van Schaack, R. H., jun., Calvert, R., and Van Schaack Bros. Chemical Works, Inc., alkoxy-esters of polybasic organic acids, (P.), B., 636.

Van Schaack Bros. Chemical Works, Inc. See Calvert, R., Van Schaack, R. H., jun., and Young, Hoylande D.

Vanselow, W., and Sheppard, S. E., photo-voltaic cells with silversilver bromide electrodes. I., A., 653.

Vanselow, W. See also Sheppard, S. E. Van Slyke, D. D., determination of acetone substances in blood and urine, A., 1190. manometric determination of carbamide in blood and urine, A., 1190.

manometric determination of amino-nitrogen, A., 1204.

Van Slyke, D. D., and Hawkins, J. A., gasometric determination of fermentable sugar in blood and urine, A., 1096.

Van Slyke, D. D., and Hiller, A., gasometric control of standard solutions for the Palmer hæmoglobin method, A., 1475. gasometric determination of methemoglobin, A., 1476.

Van Slyke, D. D., and Sendroy, J., jun., gasometric determination of oxalio acid and calcium; application to serum analysis, A., 1476.

Van Slyke, D. D. See also Hawkins, J. A. Van Slyke, L. L., chemistry of sour milk, B., 187, 374.

casein and some of its applications, B., 406.

Van Stone, E. P., and General Alloys Co., retort [for heat-treatment of metals], (P.), B., 213.

Van Vlaardingen, J. See Daniel, F. A. G.

Van Vleck, J. H., o-type doubling and electron spin in the spectra of diatomic molecules, A., 623,

vibrational selection principles in the Raman effect, A., 1215. Van Vleck, J. H., and Frank, (Miss) A., mean square angular momentum and diamagnetism of the normal hydrogen molecule, A., 982.

Van Voorhis, C. C., and Compton, K. T., heats of condensation of electrons on platinum in ionised helium, nitrogen, and argon,

Vanzetti, B. L., Cannizzaro's reaction in pinacolin and benzil transformations, A., 71.

decomposition of alkali carbonates in aqueous solution, A., 661. constitution of "olivil" from olivo resin, A., 1064.

principal constituent of olivo gum (resin); olivil and derivatives, A., 1306.

Vanzetti, B. L., and Oliverio, A., decomposition of alkali carbonates in boiling aqueous solution. II., A., 887. decomposition of lithium carbonate in boiling aqueous solution.

III., A., 887. Varahalu, K. See Rao, E. L. Vare, P. See Fuchs, (Mme.) G.

Varela-Fuentes, B. See Collazo, J. A., and Rubino, P.

Varenzov, V., evaluation of materials in the production of essential oils, B., 536.

Vareton, E. See Mezzadroli, G.

Vargha, L. von. See Ohle, H. Vargin, V. V., application of nepheline syenites of the Murman coast in the glass industry, B., 815. Varnau, B. H., and Wayne, T. B., manufacture of extra-fine soft

granulated sugar, (P.), B., 656\*.

Varrell, M. W. See Perley, G. A.

Vásárhelyi, B., availability of the isomeric aminonaphtholsulphonic acids for the colorimetric determination of phosphorus, A., 1256.

Vašátko, J. See Linsbauer, A. Vasilevski, V. V. See Scherlin, S. M.

Vasilevski, V. V. See Schernin, S. M.
Vasiliu, C. See Maxim, M.
Vass, C. C. N. See Ingold, C. K.
Vass, H. M. See Eagles, B. A.
Vasseur, A. See Chauveau, L.
Vassiliev, A. A., determination of cobalt by titration of [the precipitate of potassium cobaltinitrite, A., 1414.

Vassiliev, A. A., and Stutzer, H., effect of lead on the permanganate titration of antimony in white metal analyses, A., 1159. Vassiliev, K. V., microphotometer for comparative measurements of density on X-radiogram spots, A., 166.

method of obtaining X-radiograms, A., 166.
Vassiliev, N. A. See Sachanov, A. N.
Vassiliev, V., hardening of linseed oil, B., 528.
Vassiliev, V. See also Markman, A.

Vasta, M. See Minunni, G. Vastagh, G. See Schulek, E.

Vaubel, W., addition of lead oxide to paints, B., 63.

decomposition of oil paints by bacteria and fungi, B., 103. significance of choline in summer and winter milk, B., 736.

Vaughn, C. L. See Poe, C. F. Vaughn, S. P., and Surface Combustion Co., Inc., apparatus for heating fluids, (P.), B., 420.
Vaughn, W. E. See Marten, E. A.
Vaupel, O. See Schmid, E.

Vaurs, R., bismuth in the animal body, A., 955.

Vavilov, S. J., life period of excited molecules in aqueous fluorescing solutions, A., 489.

Vavilov, S. J., and Tummermann, L. A., photoluminescence of liquids, A., 741.

Vavon, G., and Flurer, J., cis-trans-isomerism and steric hindrance. IX. Propylcyclopentanols, A., 1290.

cis-trans-isomerism and steric hindrance. X. 1:3-Dipropylcyclopentan-2-one and 1:3-dipropylcyclopentan-2-ols, A., 1299. Vavon, G., and Peignier, P., hexahydrophthalic acids, A., 812.

cis-trans-isomerism and sterio hindrance. VIII. Methyl hydrogen hexahydrophthalates, A., 812.

Vavrineck, G. See Reich, K.

Vazcane Process, Inc., simultaneously making sugar and paper pulp from [sugar] cane, (P.), B., 696\*.
 Vazquez-Garriga, J. See Pondal, I. P.

Vecchiotti, L., formation of a heterocyclic ring closed through mercury atoms, A., 203.

Vecchiotti, L., and Copertini, S., position occupied by acetatomorcuri- (Hg·OAc') groups in anilines containing in the nucleus a halogen group or a hydrocarbon residue. V., A., 1472.

Vecchiotti, L., and Speranzini, G., position occupied by acotatomercuri (Hg.OAc')-groups in anilines containing in the nucleus a halogen group or a hydrocarbon residue. IV., A., 1091. Vedder, E. H., photo-electric smoke recorder, A., 1262.

Vedenski, C. A., furnace for the low-temperature carbonisation of coal, (P.), B., 119.
Vedenski, V. E. See Rodionov, V. M.
Vedernikov, (Mllc.). See Rodionov, V. M.
Veedip, Ltd. See Sutton, D. S.

Veen, A. G. van. See Romburgh, P. van, and Ruzicka, L.

Vegard, L., crystal structure of zircon, A., 125.

crystal structure of solid nitrogen, A., 987, 1130. Vegard, L., and Dale, H., mixed crystals and alloys, A., 24.

Vegard, L., and Maurstad, A., crystal structure of anhydrous alums R'R'(SO<sub>4</sub>)<sub>2</sub>, A., 1221.
 Végh, F. von. See Issekutz, B. von.
 Veibel, S., application of semicarbazones to the determination of letters.

ketones, A., 1474.

Veihmeyer, F. J., soil-sampling tube, B., 296. Veihmeyer, F. J., and Hendrickson, A. H., soil moisture at permanent wilting of plants, B., 532.

Veil, (Mile.) S., chromites and ferrites of nickel and of cobalt, A., 248.

ferromagnetic properties of ferrites, A., 752. Velde, H. See Lorenz, R. Velhagen, K., jun., antagonistic action of posterior lobe hormone and insulin, A., 1110.

Velikovski, A. S., and Nifontova, S. S., comparison of Russian and American petrolatums, B., 1004.

Vellard, J. See Brazil, V. Vellinger, E. See Weiss, II.

Velluz, L., biochemical synthesis and hydrolysis of glycerides, A., 99.

influence of double linkings in the biochemical synthesis and

hydrolysis of unsaturated glycerides, A., 99.
Velluz, L. See also Leulier, A.
Velzy, J. E., Groner, W. T., and Southwestern Portland Cement

Co., manufacture of cement, (P.), B., 720.

Vencov, S., critical potentials and low tension-arcs in hydrogen, A., 968.

hydrogen spectra excited by electronic shock, A., 1115. Venkataraman, K., synthetical experiments in chromone group.

I. New syntheses of 7:8-dihydroxy-2-methylchromone and 7:8-dihydroxyflavone, A., 1459.

Venkataraman, K. See also Robinson, R. Venkatasachar, B., and Sibaiya, L., spectrum of the mercury are in atmospheres of foreign gases, A., 1207.

Venkatesachar, B. See also Metcalfe, E. P.

Venkateswaran, S., Raman effect in some organic liquids, A., 490. Venkateswaran, S., and Karl, A., Raman effect with alcohols, A., 241. Venkateswaran, S. See also Gavesan, A. S.

Vensovitch, N., rapid electrolytic determination and separation of some metals without mechanical agitation of the electrolyte,

Venugopalan, M. See Rangaswami, M.

Venus-Danilova, E., isomerism of dicyclohexylacetaldehyde into the ketone, A., 1070.

Venus-Danilova, E. See also Danilov, S. Verda, A., Denigès' phospho-cœruleo-molybdenum compound, A., 40.

Verda, D. J. See Burge, W. E., and Seager, L. D. Verderau, L. See Hernandez, F.

Verdickt, G., metal packing, (P.), B., 781.

Ver Eecke, P., the Cottrell-Moeller process [for precipitation of dust and mists from gases], B., 39.

Verein für Chemische Industrie Akt.-Ges., manufacture of cellulose esters, (P.), B., 638.

Verein für Chemische Industrie Akt.-Ges. See also Löw, E., Runkel, R., and Walter, Hans.

Verein für Chemische & Metallurgische Produktion, drying of superphosphate, (P.), B., 244.

refractory coating material for furnace installations, (P.), B., 395.

manufacture of fluorino compounds of low silicon content, (P.), B., 719.

Verein für Chemische & Metallurgische Produktion. See also Schwenk, E.

Verein Deutseher Eisenportlandzement-Werke E.V., aluminous cement, (P.), B., 130.

Vereinigte Aluminium-Werke Akt.-Ges., electrolytic production of aluminium, (P.), B., 945.

Vereinigte Aluminium-Werke Akt.-Ges., and Schorn, H., [electrolytic] production of aluminium-silicon alloys, (P.), B., 61.

Vereinigte Chemische Werke Akt.-Ges., eliminating the unpleasant smell attached to glycerin obtained by fermentation, (P.),

Vereinigte Glühlampen & Elektricitäts Akt.-Ges., manufacture of

cathodes for electric discharge tubes, (P.), B., 177, 290.

Vereinigte Gummiwaren-Fabrik Wimpassing vorm. Menier-J. N.
Reithoffer, production of [hollow] rubber articles, (P.), B., 991. Vereinigte Stahlwerke Akt.-Ges., process for obtaining iron from ores, (P.), B., 133.

obtaining iron from eres, (P.), B., 398.

recovery of iron from iron-containing ores with formation of ferrio chloride, (P.), B., 523.

production of dry ferric chloride, manganic chloride, or similar metallic chlorides, (P.), B., 643.

production of iron or steel of a low degree of cold-brittleness, blue fracture, etc., (P.), B., 984.

Vereinigte Stahlwerke Akt.-Ges., Schulz, E. H., and Hulsbruch, W., annealing of carbon-containing iron and steel, (P.), B., 561. Vereinigte Stahlwerke Akt.-Ges. Seo also Heskamp, P., Hülsbruch, W., Pivovarsky, E., and Püngel, W.

Verheul, A. G., saturation of sugar juice, (P.), B., 372.

Verkade, P. E., calorimetrio investigations. II.b. Benzoic acid as a standard for the calibration of bomb calorimeters, A., 142.

Verkade, P. E., and Coops, J., jun., [non-]occurrence of fatty acids with an uneven number of carbon atoms in natural fats, oils, and waxes. I. Oil from Datura stramonium, L., A., 729.

calorimetric researches. XVIII. The two hydrobenzoins, A.,

Verkade, P. E., Coops, J., jun., Maan, C. J., and Verkade-Sanbergen, (Frau) A., calorimetrio researches. XV. Thermochemical study of cycloparaffins and their derivatives. I. Experimental data for five- and six-membered eyelie diols, A., 142.

Verkade-Sanbergen, (Frau) A. Seo Verkade, P. E.

Verley, A., substitution of alkyl groups in the aromatic nucleus [nuclear alkylation of aromatic compounds], (P.), B., 47.

Vermeulen, H., nitroveratroles, A., 1291. Vermeulen, J. See Slik, M. van der.

Vernau, J. B., rotary drying apparatus, (P.), B., 79. filtering apparatus, (P.), B., 459. filtering drum, (P.), B., 928. Vernet, W. See Isermann, S. Vernon, C. C. See Gilman, H. Vernon, J. W., deodorisation or similar treatment of fumes and gases, (P.), B., 702.

Vernon, M. A. See Lowry, T. M.

Vernon, W. H. J., and Whitby, L., open-air corrosion of copper; chemical study of the surface patina, B., 855.

Véronnet, A., electronic theory of the ether and of light, A., 738.

Verschaffelt, J. E., van der Waals' equation and thermodynamics, A., 387, 648.

limiting value of latent heat of vaporisation, A., 497.

experimental determination of surface tension by the method of traction of discs, A., 745.

ebullioscopio paradox, A., 1136. Verschnk, V. See Prileschaev, N. Verweij, E. See Aten, A. H. W.

Verzár, F., and Kúthy, A., resorption. II. Significance of bile acids for fat resorption, A., 466.

compounds of conjugated bile-acids with fatty acids and their importance in fat absorption. II. Sclubility and diffusibility. III. Surface tension, A., 1194.

Verzár, F., and Zih, A., bilirubin as a potential hamopoietic hormone, A., 220. hæmopoietic action of bilirubin and other hæmoglobin deriv-

atives, A., 467. Veselovski, A. A. See Efremov, N. N.

Vesely, K., pressure evaporation [in the beet factory], B., 371. Veselý, V., and Rein, E., reduction of aromatic nitro-compounds by hydrogen in presence of platinum-black, A., 1055\*.

Veselý, V., Stursa, F., Olejniček, H., and Rein, E., mononitro-and monoamine-derivatives of 1-methylnaphthalene, A., 1288.

Veselý, V., and Vojtech, A., methylated nitronaphthylamines, A., 437.

Veshniakov, S., and Lipschütz, A., preparation of the female sexual hormone from urino in pregnancy, A., 1202. Vesta Battery Corporation, pasting battery plates, (P.), B., 362.

Veszelszky, L. See Rigé, L.

Vetterlein, R., manufacture of sulphuric acid, (P.), B., 206. carrying out chemical reactions and furnace suitable therefore, (P.), B., 457.
Viale, G., adrenaline and choline in lymph, A., 839.

Viale, G., and Napoleoni, L., mechanism of pilocarpine hyperglycæmia, A., 1196.

Viale, G., Napoleoni, L., and Rosselli, D., excretion of oxalic acid in phloridzin diabetes, A., 1192. Viale, G, and Soneini, J. M., fate of acetylcholine in the blood,

A., 1326.

Viallet, J. See Textiles (New Process), Ltd.

Viana, J. G., and Moles, E., dissociation of hydrated nitrates,

Vianova Ges.m.b.H. für Chemische Industrie, extraction of essential

oils or odorous substances, (P.), B., 661. Viaskov, (MUe.). See Rodionov, V. M. Vichnjitch, M. See Chahovitch, X.

Vicini, F. See Crippa, G. B.

Vickers, A. E. J., application of colloid chemistry to the study of clays. I. and II., B., 394, 518.

Vickers, Ltd., and Anderson, D. M., joints of pipes or other vessels adapted to withstand fluid pressure, (P.), B., 269.

Vickers, Ltd., and Lucas, O. D., manufacture of cellulose, (P.), B., 125.

preparation from flax or other plants of fibre suitable for spinning by machinery of the kind used in cotton mills, (P.), B., 469.

treatment of flax straw and other fibrous materials; treatment of scutched vegetable fibres, (P.), B., 593. Vickers, Ltd. See also Lucas, O. D.

Vickers-Armstrongs, Ltd., Goudielock, W. B., and Machin, W., [non-corrodible] aluminium alloys, (P.), B., 439.

Vickery, H. B., basic nitrogen of plant extracts, A., 107. Vickery, H. B., and Leavenworth, C. S., separation of cystine

from histidine; basic amino-acids of human hair, A., 1328.

Vickery, H. B., and Pucher, G. W., determination of nitrate-nitrogen in tobacco, B., 796.

determination of ammonia and amide-nitrogen in tobacco, B., 796. determination of "free nicotine" in tobacco: apparent dis-

sociation constants of nicotine, B., 1031. Vickery, J. R. See Dhingra, D. R.

Victor Chemical Works. Sce Waggaman, W. H.

Vidal, R., production of fatty bodies soluble in water, (P.), B., 137, 254.

rendering fatty and organic bodies soluble, (P.), B., 443. treatment [reduction] of aromatic nitroso-compounds [and indophenols, etc.], (P.), B., 636.

Viditz, F. See Hölzl, F. Vidyarthi, N. L. Seo Hilditch, T. P. Vieböck, F. Seo Faltis, F.

Vieth, L., Heitler's theory of concentrated solutions, A., 508. Vietti, F. See Corbellini, A. Vieweg, (Miss) A. M. See Gibbs, R. C.

Vigfusson, V. A. See Thorvaldson, T.

Vignati, J., and Schnabel, P., disinfecting action of metallic salts, A., 1109.

Vignes, H. See Guillaumin, C. O.

Viktorov, P. P., influence of the anions of the mordant on the shade of alizarin-red lake, B., 92.

Vilaseca, E. S., photographic plates, (P.), B., 74.

Villachon, A., and Chaudron, G., hydrogen and earbon monoxide contents of some metals melted in vacuo, B., 778.

Villain, P., manufacture of toilet soaps, and of medicated or disinfectant soaps, (P.), B., 988.

Villard, P., devitrification of glass, B., 394.

Villars, D. S., what happens during an electron jump?, A., 230. heats of dissociation of the molecules CH, NH, OH, and HF, A., 1145.

equilibrium constants of reactions involving hydroxyl, A., 1236. Villars, D. S. See also Ritschl, R.

Villecz, P., volumetric determination of arsenic in organic and inorganic compounds in presence of halogens and heavy

metals, A., 668. Villecz, P. See also Schulek, E. Villiger, V., isomorphous replacement of a chlorine atom by the hydroxyl group in organic compounds, A., 184.

Vimmig, H., and Texas Co., manufacture of lubricants, (P.), B., 1007.

Vinassa, P., fusibility and atomic number of the elements, A.,

Vincent, and Herviaux, liming of soil and the use of heavy dressings of potash salts, B., 758.

Vincent, S., and Thompson, J. H., pneumin; a respiratory autacoid from the adrenal cortex, A., 474.

Vineall, G. J. C. See Boyd, D. R. Vingee, R. A. See Bullard, R. H. Vinogradova, I. V. See Rutovski, B. N.

Vinogradski, S., soil microbiology. IV. Degradation of cellulose in soil, B., 615.

Vinokurov, S. I., effect of insulin and adrenaline on the distribution of dextrose in the blood, A., 609.

Violle, P. L., and Giberton, A. neutralisation of the oligodynamic power of copper by solutions of electrolytes; application to mineral waters, A., 348.

antitoxic properties of calcium in respect of sparteine sulphate, A., 721

Virden, C. J. See Gulland, J. M. Virgin, E. W. J. See Fischer, E. W.

Virginia Plate Glass Corporation, apparatus for drawing sheet glass, (P.) B., 519. drawing of sheet glass, (P.), B., 645.

Virginia Smelting Co., and Binns, F. W., stripping rags or like

coloured materials with sulphur dioxide, (P.), B., 849. Virtanen, A. I., lactic acid fermentation, A., 355.

Virtanen, A. I., and Pulkki, L., volatility with steam of watersoluble organic substances, A., 140. Visco, S., and Castagna, S., variation of glutathione in isolated

organs. I., A., 1334. Vishetravski, S. A., products of decomposition in the distillation

of mazout, B., 931. Viskont, K. I., and Alimarin, I. P., determination of water in

micas, A., 1029.

Visser, G. H., reaction of ketones with alcohols under the influence of light. IV. Photo-electric effect of benzophenone, A., 155.
Vita, N. See Padoa, M.
Vitale, T., and Maresca, T., determination of the sulphur of

viscose, B., 13. Vitale, T. See also Bakunin, M.

Viterbi, E., fine-grain developers and their application to spectrography, B., 872.

Viterbi, E., and Barbato, A., action of Capstaff's "fine-grain" development in relation to the grain pre-existing in photographic emulsions, B., 911.

Viterbi, E. See also Volta, A. D.

Viterbo, E., simple sensitive method of spectrographic chemical analysis, A., 1254. Vitner, M. See Ionesco-Matiu, A.

Vitte, (Mile.) F., fluorescing power of solutions; effect of concentration; action of antioxygens, A., 979.

Vivas, F. S., and International Fireproof Products Corporation. fireproofing and preservation of wood, (P.), B., 396. manufacture of fireproofing material for paints, (P.), B., 651 production of non-combustible chlorinated hydrocarbon, (P.),

B., 1007\*.
Vivas, F. S. See also Internat. Fireproof Products Corporation. Vivatex Processes, Inc. See White, C. B.

Vivian, A. C. See Sloman, H. A.

Vladesco, R., distribution of uric acid in blood, and cause of errors in the determination of blood-uric acid, A., 339.

presence of urea in saliva, A., 592. Vladimirov, L. V. See Volfkovich, S. I. Vlassopoulos, V. See Abderhaldeu, E. Vleck, van. See Van Vleck.

Vlès, F., and Ugo, A., variations of E.M.F. developed [by metals] in contact with aqueous solutions of electrolytes of varying  $p_{
m H}$ values and salinities, A., 885. Vles, S. I., preparing partially hydrolysed cellulose acetates and

articles made therefrom, (P.), B., 594.

Vies, S. I., and Van der Want, D., preparation of artificial silk, (P.), B., 352.

Viodavetz, N. J. See Ansheles, J. M. Vodret, F. L., oil of [seeds of] Pistacia lentiscus, B., 363.

Völker, H. See Bornstein, A.

Völtz, W., and Jantzon, H., physiological efficiency of lactose, lactic acid, and sucrose, and the influence of these substances on resorption of nutrients by ruminants, A., 1333.

Voet, R., aminoacetals and aminoaldehydes containing three carbon atoms, A., 301.

Voge, C. I. B., dialysis of small volumes of serum under sterile conditions, A., 587.

colloidal properties of serum, A., 1483.

Vogel, A. I., synthesis of cyclic compounds. V. Catalytic and thermal decomposition of some normal dibasic acids; ease of formation of simple carbon rings, A., 700.

dissociation constants of organic acids. I. Primary dissociation constants of some alkylmalonic acids. II. Primary dissociation constants of some cyclic 1:1-dicarboxylic acids, A., 1009.

Vogel, E. O., and Weichelt, C. F. C. (Meier & Weichelt), refractory iron alloys, (P.), B., 524.

Vogel, F., hypophosphoric acid, A., 525.

Vogel, H.,  $\beta$  arabinosan, A., 50.

Vogel, H. See also Pictet, A. Vogel, J. L. F., hardening of molybdenum iron or steels, (P.), B., 561.

Vogel, W., centrifugal apparatus for the simultaneous neutralisation and drying of salts containing acids, (P.), B., 17.

Vogel, Wilhelm, tizerah wood and extract, B., 405.

Vogelenzang, E. H., detection and determination of mercury as the complex ammonium iodide compound, A., 416. Vogl, C. See Windisch, W.

Vogt, A., apparatus for expelling gases from liquids, (P.), B., 4.

Vogt, C. C., manufacture of artificial board, (P.), B., 894. Vogt, C. C., Pieper, E. J., and Armstrong Cork Co., manufacture of artificial board, (P.), B., 894.

Vogt, E. See Berg, H., and Seemann, H. J.

Vogt, M., glyceric acid monophosphoric acid, A., 1337.

formation and isolation of methylglyoxal in glycolysis by animal enzyme, A., 1338.

Vogt, W., electrolysis in pressure-resisting vessels, (P.), B., 362. Vohl, A., and Wachtendorf, W., purification of solutions of metal [zinc] salts, (P.), B., 394\*.

Vohrer, H. See Holde, D. Vohsen, E. See Simon, F.

Voicu, J., influence of boric acid on Micrococcus ureæ and urease in presence of dextrose, A., 1201.

Voicu, J., and Dumitrescu, (Mlle.) V., influence of boric acid on oxidation of organic substances with which it forms complexes. I. General investigations based on methods used in sugar analysis, A., 1189. Voicu, O. See Spacu, G.

Voigt. See Muth.

Voigt, K. H., primary photo-electric current in antimony glance, A., 1217.

Voigt, W. See Hantzsch, A.

Voinchet, A. L.J., and Lerciu, A. A., manufacture of agglomerated blocks of fuel, (P.), B., 932.

Voisenet, E., substance responsible for the bitter taste formed in the amertume of wines, B., 413.

divinylethylene glycol as cause of the taste in bitterness of wines, B., 760.

Voit, composition of body and organs of homeotherms and poikilotherms, A., 1098.

Voitech, A. See Veselý, V. Volf, F. F., and Popov, L. I., replacing lime by ferric oxide in the manufacture of sodium chromate, B., 321. conversion of sodium chromate into dichromate, B., 812.

Volf, F. F., and Yatlov, V. S., manufacture of potassium chloride from Solikamsk sylvite. I. and II., B., 127, 515.

Volfkovich, S. I., utilisation of fluorine in the manufacture of superphosphate, B., 918.

Volfkovich, S. I., and Kamzolkin, V. P., new cycle of phosphate digestion with acid, B., 918.

Volfkovich, S. I., and Vladimirov, L. V., determination of free phosphoric acid in low-grade superphosphate, B., 918. moisture content and hygroscopicity of superphosphate, B., 918.

Volkholz, H. See Vorländer, D.

Volkmann, H. See Wolf, K. L.
Volkmer, H. See Ruff, O.
Volkova, Z. V., and Titov, V. S., interference effect at the disturbed surface of a liquid and surface tension, A., 1002.

Volkringer, II., continuous spectrum of mercury vapour, A.,

Vollmann, H. Sco Grasselli Dyestuff Corporation, and Kränzlein, G.

Vollrath, R. E. See Rice, F. O. Volmar, Y., and Thurkauf, O., concrete essence of lavender: its constants and chemical composition, B., 1050.

Volmer, F., vapour pressure of thallium and lead halides, A., 1226.

Volmer, M., particle formation and particle action as a special case of heterogeneous catalysis, A., 1399.

Volta, A. D., new combination of sulphæmoglobin, A., 459. detection of specific blood, A., 461.

Volta, A. D., and Viterbi, E., spectrographic study of the "chloro-hæmoglobins" in the blood of various animals, A., 461.

Voltz, T. See Bader, M. Volwiler, E. H., and Abbott Laboratories, enteric coated capsule, (P.), B., 73.

Volwiler, E. H., Tabern, D. L., and Abbott Laboratories, antiseptic

anæsthetic salts, B., 797. Vondrák, J., rapid method of detecting lemonade containing

saccharin, B., 575 determination of roasted sugar beet in admixture with roasted

chicory, B., 695. mathematical proof of the reliability of the results of the determination of sugar in the sweet slices, B., 695.

relation of the amides to alkalinity decrease during beet-sugar manufacture, B., 791.

Vondrák, J. See also Staněk, V.

Vondran, A., destruction of vermin and their brood, also injurious germs, parasites, etc., (P.), B., 624.

Vonk, H. J., and Heyn, A., the  $p_{\rm H}$  optimum in the action of

trypsin on fibrin, A., 1338.

Vonk, H. J., and Wolvekamp, H. P., factors influencing tryptic digestion in the intestine, A., 848.

optimum  $p_{\rm H}$  for trypsin and the reaction of the intestinal contents, A., 1107.

Voogd, J. See Aubel, E. van, and De Haas, W. J.

Voorhees, H. R., and Lindsay, G. A., K X-ray absorption edge of iron, A., 1355.

Voorhees, H. R. See also Lindsay, G. A.

Vořišek, J. See Hanus, J.

Vorländer, D., dimethyldihydroresorcinol as reagent for aldehyde, and carbon assimilation, A., 296. methone as a reagent for aldehydes, A., 924.

benzene and mobility of the iodoxy-group, A., 1287. Vorländer, D. [with Ihle, C., and Volkholz, H.], determination and separation of formaldehyde and acetaldehyde by means of "methone," A., 949.

Vorländer, D., and Daehn, E., ζ-phenyl-Δαγε-heptatrienoic acid, A., 555.

e-phenyl-Δβδ-pentadienal and η-phenyl-Δβδζ-heptatrienal. II., A., 559.

Vorländer, D., and Gieseler, K., p-methoxycinnamylideneacetic acid, A., 697.

p-methoxycinnamaldehyde and p-methoxycinnamylideneacetaldehyde, A., 699.

Vorländer, D., and Guthke, F. W., action of alkali hydroxide on chloroform, A., 538.

Vorländer, D., and Koch, O., green varieties of p-dihydroxydibenzylidene ketones, A., 564.

Vorobiev, N. See Nikolai, N. A. Voronca-Spirt, (Mmc.) C. See Bertrand, G. Voronkov, G. P., and Pokrowski, G. I., interference colours of finely disperse precipitates in transmitted light, A., 1234.

Voronov, A. I., use of mixtures of petroleum products and creosote for preservation of timber, B., 768.

Voroshcov, N. N., colouring organic fibres or articles such as skins, furs, paper, etc. consisting of animal and vegetable fibres, (P.), E., 774.

Voroshcov, N. N., [with Kasatkin, A. G.], naphthalene series.

I. Mechanism of the reaction of naphthol derivatives with hydrogen sulphite, A., 310. mechanism of hydrogen sulphite reaction with naphthol deriv-

atives, A., 1063.

Voroshcov, N. N. and Bogdanov, S. V., naphthalene series. 11. Action of sodium hydrogen sulphite on nitrosonaphthols, A., 311, 1063. Voroshcov, N. N., and Kasatkin, N. M., nitration of  $\beta$ -naphthol-

6-sulphonic acid, B., 934.

Voroshcov, N. N., and Kulev, A. A., preparation and conversion [into the nitro- and amino-naphthols] of 5-nitro-a-naphthylamine, B., 934.

Voroshcov, N. N. See also Tschitschibabin, A. E. Vos, H. See Heeres, P. A.

Vosburgh, W. C., derivation of the solubility product law, A.,

Vosburgh, W. C., and Craig, D. N., lead dioxide-lead sulphato

electrode, A., 1015.

Vose, C. E. See Corson, B. B.

Voskressenskaja, N., electrical conductivity of binary liquid systems containing amines [or pyridine] and allylthiocarbimide, A., 130.

double decomposition in the absence of a solvent. VII. Equilibrium in the systems formed from thallous sulphate and mercury halides, A., 651.

Vosmaer, A., applications of ozone [for bleaching], B., 353. Vosnessenski, F., reserves under sulphur colours [in printing], B., 169.

Voss, A. See I. G. Farbenind. A.-G., and Kränzlein, C.

Voss, H. E. See Loewe, Siegfried.

Vosschinskaja, Z. S. See Stadnikov, G. L. Vossen, B. See Grasselli Dyestuff Corporation. Votoček, E., constitution of chinovose, A., 682.

Votoček, E., and Kotrba, J., mercurimetry, A., 529. Votoček, E., and Malachta, S., conversion of sugars into furan

or hydrofuran derivatives, A., 1166.
Votoček, E., and Prelog, V., βλ-dihydroxypalmitic acid from rhamnoconvolvulic acid, A., 541.

Votoček, E., and Rác, F. identity of chinovose with d-glucomethylose (isorhodeose), A., 682. conversion of methylpentoses into methylfurfuraldehyde, A.,

1278. Votoček, E., and Rys, L., derivatives of 2:4-dichloro-, 2:4:6-trichloro-, and 2-chloro-4-nitro-phenylhydrazines with aldehydes

and ketones, particularly sugars, A., 1061. Votoček, E., and Valentin, F., rhamnoconvolvulic acid, A., 543.

Voulet, P. See Pomey, J.

Vournasos, A. C., silver iodidothiocyanate, A., 1153. Vozdvischenski, G. S., and Gerasimov, A. F., action of sodium chloride on collargol, A., 764.

Vrabély, V. See Zeehmeister, L. Vrevski, M. S., vaporisation of binary mixtures. I. Method of determining heats of vaporisation of pure liquids and solutions,

A., 1374. Vrgoč, A., Macedonian opium, B., 622

Vridhachalam, P. N. See Harrison, W. II.

Vuillermoz, J., reversible E.M.F. of electrolysis, A., 653.

Vuilleumier, A., and New Departure Manufacturing Co., heat-treatment apparatus, (P.), B., 739.
 Vuillenmier, R., and Safety Car Heating & Lighting Co., heat-

exchange apparatus, (P.), B., 663.

Vuisotzki, V. A. See Filipovich, I. V.

Vuk, M., and Gömöry, A., action of chlorine on wheaten flour in treatment with gologas, B., 574.

Vuk, M., and Spanyar, P., improvement of flour, B., 299. Vulcan Detinning Co. See Horsch, W. G., and McIlhenney, H. R. Vulcan-Feuerung Akt.-Ges., [spraying nozzle for introducing water into] cupola furnaces, (P.), B., 251.
Vvedenskaja, (Mlle.). See Rodionov, V. M.

Vyskočil, A., electrolytic preparation of iodoform without the use of platinum, A., 1021.

w. Waché, X., and Chaudron, G., methods of testing the corrosion of light metals and alloys, B., 477. Wache, X. See also Chevenard, P. Wachs, H. See Müller, Adolf. Wachstein, M. See Silberstein, F. Wachtendorf, W. See Vohl, A. Wachter, A. See Hildebrand, J. H. Wacker Gesellschaft für Elektrochemische Industrie G.m.b.H., A., manufacture of metal alcoholates [alkoxides], (P.), B., 671. manufacture of [chloroform-soluble] acetylcellulose, (P.), B., manufacture of acetone from acetylation liquors, (P.), B., Wacker Gesellschaft für Elektrochemische Industrie G.m.b.H., A., and Müller, Hugo, diaphragms for electrolytic cells, (P.), B., 605. Wacker Gesellschaft für Elektrochemische Industrie, A. See also Gruber, W. Waddell, J. See D. P. Battery Co., Ltd. Waddell, J. (Madison), and Steenbock, H., [with Donk, E. van], destruction of vitamin-E in a diet of natural foodstuffs, A., 222. Waddell, J., Steenbock, H., Elvehjem, C. A., and Hart, E. B. [with Donk, E. van], iron in nutrition. IX. Deficiency of copper as causo of anamia, A., 1099. Waddell, J., Steenbock, H., and Hart, E. B., [with Donk, E. van], iron in nutrition. VIII. Ineffectiveness of large doses of iron in curing anamia in the rat, A., 1099. iron in nutrition. X. Specificity of copper as a supplement to iron in the eure of nutritional anæmia, A., 1481. Waddell, M., and Watson, H. C., producing fibre and yarn from unretted flax plants, (P.), B., 13.
treating or retting flax fibre, (P.), B., 167.
[winding] process for retting, boiling, bleaching, or otherwise treating yarn or rove with liquids, (P.), B., 281.
[continuous] treatment of [unretted] flax for spinning, (P.), B., 201. B., 391. Waddell, M., Watson, H. C., and Watson-Waddell, Ltd., treating or retting fibre-bearing plants, (P.), B., 470\*. Wadehn, F. See Glimm, E. Wadia, J. H. See Cains, J. F. Wadlund, A. P. R., absolute X-ray wave-length measurements, Wadsworth, G. W. See Borgen, H. Wadsworth, J. W., cracking and rectifying petroleum oils, etc., (P.), B., 120. Wähner, A. See Loewe, Siegfried.
Wälder, R. See Defris, R.
Waelsch, H. See Haurowitz, F. Waentig, P., effect of chemical agents, especially of oxidising influence, on the behaviour of cellulose, B., 592. Wärme- & Kälteschutz G.m.b.H. Althoff & Schoenau, and Althoff, P., non-heat-conducting coverings for steam pipes, etc., (P.), B., 625. Wagenaar, M., microchemical reactions of homatropine, A., 79. microchemical reactions of caffeine, A., 200. microchemical reactions of theobromine, A., 200. micro-chemistry [detection] of theophylline, A., 460. microchemical reactions of quinine, A., 584. microchemical reactions of quinidine, A., 584. microchemical reactions of cinchonine, A., 584. microchemical reactions of cinchonidine, A., 584. microchemical reactions of physostigmine, A., 707. microchemical reactions of piperine, A., 829. microchemical reactions of sparteine, A., 1319. microchemical reactions of scopolamine, B., 112. detection of rice flour in pepper powder, B., 146. distinguishing wheaten flour and bread from those of rye, B., microchemical reactions of nicotine, B., 869. microchemical reactions for coniine, B., 869. determination of husk in cocoa and cacao products, B., 955. Wagenen, G. van. See Failey, C. F.

production of phosphorus, (P.), B., 940.

oration, treatment of coke, (P.), B., 8. Waggoner, C. S. See Drabkin, D. L. Wagner, Albert, and Kuttner, F., production of fine-fibre artificial silk, (P.), B., 469. Wagner, Alfred, carvacrol, B., 111. Wagner, Alois. See Baborovský, J. Wagner, C., adsorption phenomena in systems of several constituents, A., 1231.
Wagner, C. See also Bennewitz, K., Bodenstein, M., and Schumacher, H.J.Wagner, C. R., recent development in the art of cracking [of petroleum hydrocarbons] in the vapour phase, B., 877. Wagner, C. R. See also Osterstrom, R. C. Wagner, E. C. See McNabb, W. M.
Wagner, F. C. See Borgstrom, P.
Wagner, G., X-ray investigation of the mixed crystal system BaSO<sub>4</sub>+KMnO<sub>4</sub>, A., 245. Wagner, Hans, consistency and gel formation, A., 264. [adhesives and paint vehicles], B., 293. titanium white catalysis?, B., 293. action of the substratum on coloured paints, B., 565. crystallisation phenomena in dye salts, B., 710. action of pigments on tung oil, B., 988. Wagner, Hans, and Kesselring, J., [olco-casein] emulsion vehicles, B., 218. Wagner, Hans, and Pfanner, H., oil absorption and particle size [of pigments], B., 785. Wagner, Hans. See also Braun, J. von. Wagner, Hermann, Fischer, Erich, and General Aniline Works, Inc., manufacture of azo-dyes, (P.), B., 974\*. Wagner, Hermann, and General Aniline Works, Inc., manufacture of azo-dyes derived from 2-hydroxynaphthalene-3-carboxylic acid arylamides, (P.), B., 712\*.

Wagner, Hermann. See also Grasselli Dyestuff Corporation.

Wagner, Joachim. See Kubelka, V., and Neuberg, C. Wagner, Josef, comparative study of oxidation and deoxidation phenomena in the manufacture of [steel] rails by the Thomas and Martin processes, B., 721. Wagner, O., preparation of pure quinoline from crude coal-tar quinoline, (P.), B., 709.

Wagner, O. H. See Bredig, G.

Wagner, R. Seo MacGillivray, J. M. Wagner, T. B., organic phosphate and its manufacture, (P.), B., Wagner-Jauregg, T., replacement of hydroxyl group in hydroxyacid esters by chlorine with phosphoryl chloride and pyridine; (steric course of substitution), A., 295. racemisation. I. Racemisation of halogen-substituted esters, A., 1423. Wagner-Jauregg, T. See also Kuhn, R. Wahl, A., Lantz, R., and Société Anonyme des Matières Colorantes & Produits Chimiques de St.-Denis, manufacture of naphthaquinone derivatives, (P.), B., 467\*. Wahl, A., and Lobeck, J., naplithoisoindigotins, A., 938, 1463.
Wahl, A., and Rolland, J., composition of commercial artificial silks, B., 167. Wahl, A., and Sisley, J. P., elementary organic analysis, A., 85<sup>a</sup>. Wahl, A. See also Lantz, R., and Soc. Anon. des Mat. Col. & Prod. Chim. de St.-Denis. Wahl, R. See Guillaumin, C. O. Wahl, W., eutectic surfaces, A., 142. stereochemistry of zinc and cadmium, A., 157. Wahlin, H. B., emission of positive ions from metals, A., 736. critical potentials of metals, A., 1356.

Wahlin, J. G., rennin action. I. Rennin production by Bacillus prodigiosus. II. Effect of rennin on sodium caseinogenate, A., 608. Wahlteich, H. W., action of trypsin on caseinogen, A., 957. Waibel, F., absorption measurements in the cresium principal series; widening due to vapour pressure, A., 479. Wait, E. G., centrifugal emulsifier or homogeniser, (P.), B., 839. Wait, G. R., Brickwedde, F. G., and Hall, E. L., electrical resistance and magnetic permeability of iron wire at radio frequencics, A., 249, 1370.
Waitt, A. H. See Frolich, P. K.
Wajchselfisz, H. See Jablczyński, K. Wagener, C. See Excelsior Fenerlöschgeräte A.-G. Waggaman, W. H., Easterwood, H. W., and Victor Chemical Wakabayashi, Y., liver-glycogen and muscle training, A., 93.
Wakefield, E. G., colorimetric determination of sulphates in body Works, briquetted charge and production of phosphorus and potash therefrom, (P.), B., 681. fluids, A., 592.

Waggoner, C. L., Thacher, F. B., and By-Products Coke Corp-

Wakefield, E. G., [retention of] inorganic serum-sulphates, urea, and creatinine in cases of renal insufficiency; effect of diuresis [and of chronic nephrosis] on serum-sulphates, A., 1193.

Wakefield, J., dyeing of vat, sulphur, and mineral khaki colours on fabrics, (P.), B., 354, 1013\*.

Waksman, S. A., and Stevens, K. R., chemical composition of peat. II. Chemical composition of various peat profiles, B., 231.

decomposition of wood; composition of fossilised wood, B., 420. chemical composition of peat. III. Chemical studies of two Florida peat profiles, B., 421.

chemical composition of peat. IV. Chemical studies of highmoor peat from Maine, B., 545.

chemical composition of peat. V. Rôle of micro-organisms in peat formation and decomposition, B., 965.

Waksman, S. A. See also Tenney, F. G.

Wal, Y. van der. See Os, D. van. Walbaum, H., and Rosenthal, A., testing of blossom extracts. I., B., 1031.

Japanese peppermint oil, B., 1032.

essential oil from green violet leaves, B., 1049.

presence of sulphur compounds in mignonette extract, B., 1049. Walczyńska, J. See Milobedzki, T.

Walden, D. O., and National Carbon Co., Inc., primary cell, (P.),

B., 823. Walden, P., trichloroacetic acid as a cryoscopic medium for

organic compounds and binary salts, A., 1233. Landolt and Oudemans' law in non-aqueous solutions, A., 1385. Walden, P., and Birr, E. J., conductivity measurements in

acetonitrile, A., 1390. Walden, P., and Busch, G., hydrocarbons as solvents. I. Conductivity of binary salts in ethylene chloride, A., 401.

Walden, P., and Werner, Otto, dipole moments of some monoand di-substituted benzene derivatives, A., 243.

Waldmann, H. See Fierz, H. E.

Waldorf Paper Products Co. See Bache, E.

Waldron, M. E. See Eldridge, H.

Waldschmidt-Graser, J. See Waldschmidt-Leitz, E. Waldschmitz-Leitz, E., specific action of proteolytic enzymes and its significance in determining the structure of proteins, A., 353.

Waldschmidt-Leitz, E., Balls, A. K., and Waldschmidt-Graser, J., specificity of animal proteases. XVI. Dipeptidase and polypeptidase from the mucous membrane of the intestine, A., 723.

Waldschmidt-Leitz, E., Bek, I. J., and Kahn, J., activation of proteolysis in animal organs and its significance in the metabolism of malignant tumours, A., 344.

Waldschmidt-Leitz, E., and Purr, A., specificity of animal proteases. XVII. Proteinase and carboxypolypeptidase from

pancreas, A., 1338. Waldschmidt-Leitz, E., and Schlatter, H., stereochemical specific-

ity of proteolytic enzymes, A., 100.

Waldschmidt-Leitz, E., and Schuckmann, G. von, enzymic proteolysis. V. Structure of animal tissue substances, A., 1107. specificity of peptidases. III. Affinity measurements on animal dipeptidase, A., 1339.

Waldschmidt-Leitz, E., Stadler, P., and Steigerwaldt, F., theory

of blood coagulation, A., 89.

blood coagulation; retardation and acceleration, A., 951. Walerstein, I., effect of external fields on the polarisation of the light in hydrogen canal rays, A., 736.

Walker, A. C. See Murphy, E. J.

Walker, B., viscosity of soap solutions, B., 364.

Walker, B. S., and Sleeper, F. H., tryptophan reactions in the cerebrospinal fluid, A., 209.

Walker, B. S. See also Wyman, L. C.

Walker, D. J. See Sure, B. Walker, E. E. See Brit. Celanese, Ltd., Cox, J. W., and Imp. Chem. Industries, Ltd.

Walker, G. H. See Heenan & Froude, Ltd., and Walker, H. Walker, G. K. See Priest, I. G.

Walker, H., Walker, G. H., Epstein, M. H., and Marks, E., manufacture of cellulose, (P.), B., 470\*.

Walker, H. L. See Sullivan, F. W.

Walker, J. C. See Link, K. P.

Walker, J. F., oxidation of m-xyloreinol, A., 1175.
Walker, L. J. See Markwell, W. A. N.

Walker, L. P., crushing machine, (P.), B., 580.
Walker, P. H., and Hickson, E. F., accelerated tests of organic protective coatings, B., 64\*.

Walker, R. B. R. See Somer, A. J.

Walker, R. J., electric furnace, (P.), B., 400.

Walker, T. K. See Butterworth, J., Challenger, F., Hastings, J. J. H., and Stent, H. B. Walkhoff, E. See Reyher, P.

Wallace, B. F., compound for use [as dressing] in casting metals, (P.), B., 857.

Wallace, G. B. See Neuwirth, I.

Wallace, G. W., apparatus for treating [hydrocarbon] oils, (P.), B., 548\*.

Wallace, G. W., and S.E. Co., carbonising apparatus, (P.), B.,

Wallace, J. H., jun. See Furman, N. H.

Wallace, T., chlorosis of fruit trees. II. Composition of leaves, bark, and wood of shoots in cases of lime-induced chlorosis. III. Chlorosis of plums due to potassium deficiency, A., 362.

Wallace, W. M. See White, A. Wallen, J. See Gerard, R. W.

Wallenberger, F., electro-soda process for regeneration of black or brown liquors in soda-pulp manufacture with avoidance of trouble due to odours, B., 318.

Wallenstein, H. See Clar, H.

Waller, I., and Hartree, D. R., intensity of total scattering of X-rays, A., 746.

Wallerius, G., determination of nitrogen in nitro-compounds by reduction with stannous chloride and subsequent titration, A., 85.

Wallerstein, J. See Ederer, S.

Walley, V. R. See Dokkenwadel, F. G. Wallis, E. S., Beckmann rearrangement in presence of free radicals, A., 1447.

Wallis, T., abolition of the Beaumé hydrometer, B., 343. Wallrabe, G., laurel fat, especially its optical activity, B., 859.

artificial crystallised Karlsbad salts, B., 895. fat from the seed husks of laurel berries, B., 946.

Wallwork, J.A. See Everest, A.E.

Walmsley, H. P., some transient effects with ions of low mobility, A., 230.

constitution and density of particles in precipitated smokes, A., 869.

ionisation currents from zinc oxide smokes, A., 1383. Walsh, J. H., and Johns-Manville, Inc., drying and carbonising

textile fabrics, (P.), B., 716. Walsh, L. J., and Standard Oil Development Co., conversion of hydrocarbons, (P.), B., 882.

Walsh, V. G., and Hayes-Gratze, E. V., treatment of wool, (P.), B., 469.

Walsted, J. P., case-hardening of special steels with ammonia,

B., 818.

Walter, C. See Borsche, W.

Walter, E. See Braun, K., and Schaum, K.

Walter, Hans, and Verein für Chemische Industrie Akt.-Ges., diffusion reaction, (P.), B., 192.

Walter, Heinrich, effect of plasmolysis on carbon dioxide assimilation in plants, A., 106. osmotic pressure of cell-sap of plants, A., 360.

Walter, J. M., and Barratt, S., band spectra associated with zinc, cadmium, and mercury, A., 237.

Walter, L. E., influence of atmospheric humidity on paper, B.,

Walter, R., [hard] alloys [containing carbonitrides], (P.), B., 822. Walter, R. See also Meyer, Herbert.

Walter, R. H., nitrogen-fixing bacteria of the genus Rhizobium,

Walter, Z. T. [with Schlundt, H.], partition coefficient in the

fractional crystallisation of radium barium bromide solutions, A., 132. Walters, F. M., jun. See Meggers, W. F.

Walther, B., evaluation of washing agents by surface-tension measurements, B., 136.

Walther, P., measurement of vacuum during distillation under reduced pressure, A., 1261.

Walther, R. von, and Benthin, G., determination of water in lignite with calcium carbide, B., 965.

Walti, A. See Levene, P. A.

Waltner, K., action of large amounts of iron. II. Action on blood, growth, fertility, and lactation, A., 469. [biological] action of certain metals, A., 720.

Waltner, Karl. See Waltner, Klara.

Waltner, Klara, and Waltner, Karl, cobalt and blood, A., 1336.

Walton, D. C., and Eldridge, W. A., action of chlorine on men poisoned by toxic smokes, A., 602.

Walton, E. See Clemo, G. R.

Walton, G. P., Gardiner, R. F., and United States, manufacture of fertiliser material, (P.), B., 411. Walton, I. P. See Butler, J.

Walton, J. C., temperature-recording micropress for studying the course of vulcanisation, B., 612.

Walton, J. H., bacteriology of silage, B., 68. Walton, S. F., and Exolon Co., reclamation of abrasive materials,

(P.), B., 719. Walton, S. G. See Cooksey, T.

Wampler, R. W. See Harkins, W. D.
Wanamaker, E. M., and Anaconda Sales Co., apparatus for electrodeposition, (P.), B., 135.

Wang, C. C., Frank, M., Kern, R., and Hays, B. B., metabolism of under-nourished children. III. Urinary nitrogen; creatin-

ine, A., 343.

Wang, C. C. See also Gerstley, J. R.

Wang, H. S., rectangular graphs as applied to the proximate analyses of Chinese coals, B., 502.

Wang, S. C. Seo Webb, H. W. Wang, T. C. See Sherman, H. E.

Wanger, J., filter for gases, (P.), B., 116.

Wanka, L. See Soholl, R. Wansbrough-Jones, O. H. See Rideal, E. K.

Wantoch, H., influence of various substances on the sugar and ammonia content of blood, A., 1190.

Warburg, O., photochemistry of iron-carbonyl compounds and the absolute absorption spectrum of the respiratory enzyme, A., 37.

how many respiratory enzymes are there?, A., 98.

is aerobic glycolysis specific for tumours?, A., 464. [respiratory enzymes], A., 721.

the respiratory enzyme and oxidases, A., 1474.

the respiratory enzyme and oxygen storage, A., 1474.

Warburg, O., and Kubowitz, F., manometric measurement of small partial pressures of oxygen, A., 109.

concentration of the [respiratory] enzyme-iron in the cell, A., 351.

action of carbon monoxide on the respiration of Aspergillus oryzes, A., 1475.

is the inhibition of respiration by carbon monoxide complete?, A., 1475.

respiration at low oxygen tensions, A., 1475.

respiratory enzyme in the scrum of suffocated animals, A., 1475.

Warburg, O., and Negeleln, E., photochemical dissociation in intermittent irradiation and the absolute absorption spectrum of the respiratory enzyme, A., 216.

absolute absorption spectrum of the respiratory enzyme; photochemical dissociation of iron pentacarbonyl, A., 470. absorption spectrum of the respiratory enzyme of the retina,

A., 1475.

absorption spectrum of the respiratory enzyme, A., 1475.

Warburg, O., Negelein, E., and Christian, W., carbylamine-hæmoglobin and the photochemical dissociation of its carbon monoxide compound, A., 1475.

Warburton, T., production of the [normal and] acid sulphates

of a naphthylamine, (P.), B., 709.
Warcollier, and Le Moal, determination of sulphurous acid in

apple juice and cider, B., 793. Ward, A. C., pottery kiln, (P.), B., 519. Ward, A. F. H. See Wilkins, F. J.

Ward, A. L. See Fulweiler, W. H.
Ward, A. M., bivalency of carbon. II. Displacement of chlorine from desyl chloride; benzoin diethylacetal, A., 1072.

Ward, A. M. See also Dorrington, B.J. F., and Kny-Jones, F. G. Ward, A. T. See Brit. Thomson-Houston Co., Ltd.

Ward, C. A., and Standard Oil Development Co., manufacture of

paraffin, (P.), B., 707. Ward, C. J., and Hillman, S. E., [vulcanite frames for electrodes of] electric accumulators, (P.), B., 986.

Ward, H. T. See Schlerz, E. R.
Ward, P. J., Mitchell, J., and Steel Bros. & Co., Ltd., distillation of petroleum, etc., (P.), B., 1006.
Ward, W. J. V., and Imperial Chemical Industries, Ltd., recovery of metal classics.

of methyl alcohol, (P.), B., 845.

Wardlaw, H. S. H., and Horsley, C. H., basal metabolism of Australian aborigines, A., 211.

Wardlaw, W. See Percival, E. G. V., and Spittle, H. M. Wardley, T. See Brit. Hartford-Fairmont Synd., Ltd. Ware, A. H., use of aldehydes and dihydroxyacetone in the dotection and differentiation of phonols. I. Colour reactions given in sulphuric acid solution. II. Precipitation and staining tests involving the use of hydrochloric acid. III. Detection of cresol in carbolic acid by means of vanillin, B., 844.

tests for phenols involving the uso of hydrogen peroxide, B., 844. Ware, E. E., and Acme White Lead & Color Works, manufacture

of varnish, (P.), B., 255.

Ware, L. A., direct determination of Thomson coefficients in single-crystal zinc rods, A., 382.

Ware, W. M. See Goodwin, W. Wareham, R. C. See Heenan & Froude, Ltd. Warlimont, A. See Heiduschka, A.

Warnecke. See Gerlach, H. Warner, A. H., variation of the photo-electric effect with temperature and determination of the long wave-length limit for tungsten, A., 735. Warner, A. W., dehydration of tar, (P.), B., 46.

Warner, I. See Mount, W. D. Warner, J. C., organic inhibitors in the acid corrosion of iron, B., 751.

Warner, M. E. See Williams, R. J.

Warren, B., and Bragg, W. L., structure of diopside, CaMg(SiO2)2, A., 1223.

Warren, B. E., X-ray determination of structure of metasilicates, A., 1130.

Warren, F. L. See Farmer, E. H. Warren, H. W. H. See Brit. Thomson-Houston Co., Ltd. Warren, J. A. See Grier, J. A. Warren, L. A. See McClelland, E. W.

Warren, L. E., assay of jalap, B., 870. Warren, S. J. See McLachian, J. D.

Warsitz, R., operating industrial furnaces and furnaces adapted thereto, (P.), B., 701.

Warszawska, P. See Swiderska, M.

Wartenberg, H. von, Linde, H., and Jung, R., fusion diagram of

highly refractory oxides, A., 30.
Wartenberg, H. von, and Pertzel, H. [with Savaage, F.], removal

of thin films of solution in centrifugals, B., 229.

Wartenberg, H. von, and Schultze, G., action of atomic hydrogen on hydrocarbons, A., 405.

Waser, E., Sommer, H., Landweer, C., and Gaza, C., catalytic reduction of phenol and naphthol ethers with hydrogen and platinum, A., 691. Waser, E. B. H., and Möllering, H., [preparation of] ac-tetra-

hydro- $\beta$ -naphthylamine, A., 1057. Washburn, E., Brunn, J. H., and Hicks, (Miss) M. M., apparatus and methods for separation, identification, and determination of the constituents of petroleum, B., 345.

Washburn, E. W., determination of mol. wts. in the vapour

state from vapour-pressure and evaporation data, A., 753.

Washburn, E. W., and Smith, E. R., electrical conductance method for determining liquefaction temperatures of solids, A., 753.

Washburn, M. See Shear, M. J. Washburn, W. F. See Titanium Pigment Co., Ino.

Washington, D. E., [liquid replenisher for] electrical accumulators and storage batteries, (P.), B., 986. Washington, D. E., and Connell, W. B., dryor, (P.), B., 739.

Wasitzky, A. See Mayrhofer, A.

Wasmuht, R., comparative colorimetric investigations, A., 416. analysis of metals and ores by heating in a current of chlorine, B., 328.

purification of gases, especially chlorine, by repeated liquefaction, B., 392.

purification of gaseous chlorino, B., 812.

Wasmuht, R., and Oberhoffer, P., Ehn's cementation test [for

steels], B., 211. determination of oxide inclusions in iron and steel by analysis

of the residue obtained by treatment with chlorine, B., 854. Wasmuth, F., [toxicity of] arsenic, A., 846. Wassell, H. E. See Jackson, L. E. Wassermann, G. See Schmid, E.

Wassermeyer, H., action of ions on the ageing of muscle pressjuice, and the influence of hydrogen-ion concentration, A.,

dissociation constants of adenosinephosphoric acid of muscle and of inosinic acid, A., 397.

Wassermeyer, H., ammonia metabolism of the kidneys and its relation to the acid-base balance, A., 1101.

Wassermeyer, H. See also Embden, G. Wassmuth, E. Sec Riesenfeld, E. H.

Wasteneys, H., and Borsook, H., effect of emulsification on the poptic synthesis of protein, A., 1197.
Watanabe, K., variation of acetone substances in the living

organism, A., 1102.

Watanabe, M., equilibrium in the reduction of silver sulphide by

hydrogen, A., 1388. Watanabe, M., and Nakau, C., nephelometric study of colloidal

solutions of metallic sulphides, A., 1379.

Watanabe, M., and Sato, H., colorimetric and biological determination of the adrenaline content of the suprarenals of rabbits, A., 959.

Watanabe, S. See Tanaka, M.

Watanabe, T., nature of carbon produced by catalytic decomposition of carbon monoxide with iron, A., 773.

Watanabe, T. See also Shiba, H.

Watasé, T., heat of formation of cementite, A., 32.

Watatani, M., corrosion of crucible in glass manufacture, B., 815.

Watchorn, E. See Holmes, B. E. Waterman, A. T., effect of electric fields on the emission of electrons from conductors, A., 4. electrical conductivity of metals as a function of pressure

according to the Sommerfold electron theory, A., 20.
Waterman, H. I., and Bertram, S. H., hydrogenation of oils,

Waterman, H. I., Bertram, S. H., and Westen, H. A. van, application of the hydrogen value to unsaturated fatty acids, B., 607.

Waterman, H. I., and Elsbach, E. B., citronellal, A., 542. apparatus for distillation at very low pressures, A., 1261.

Waterman, H. I., Groot, J., and Tussenbrock, M. J. van, adsorption of Schäffer's sodium naphtholsulpbonate and the azo-dye orange-ENL by technically important decolorising charcoals,

stability to light of records made with typewriter ribbon,

duplicate paper, and copying ink pencils, B., 514.
Waterman, H. I., Nuyl, T. W. te, and Perquin, J. N. J., thermal decomposition of paraffin wax in presence and in absence of hydrogen under high pressure, B., 931.

Waterman, H. I., Perquin, J. N. J., and Westen, H. A. van, determination of the hydrogen value of unsaturated compounds,

B., 102.

Waterman, H. I., and Priester, R., aromatic allyl and propenyl compounds. II. Geometrical isomerism of isosafrole, A., 60. aromatic allyl and propenyl compounds. III. isoSafrole dibromide, A., 1292.

Waterman, H. I., and Soest, L. L. W. van, eracking of Rangoon paraffin wax with aluminium chloride at temperatures below 330°, B., 84.

Waterman, H. I., Spijker, P. van 'T., and Westen, H. A. van, preparation of amylene with a theoretical hydrogen value, A., 907.

Waterman, H. I., and Tussenbrock, M. J. van, desulphurising action of silica gel. III., B., 84.

influence of heat on the colour of soya-bean oil, and decomposition at 180-225° under the influence of nickel catalysts, B., 861.

Waterman, H. I., and Westen, H. A. van, preparation of pure cyclohexene, A., 921.

Waterman, N., De Kromme, L., and Lemmens, J. F., cytolysis in cancer. III., A., 464.
Waterman, R. E. See Williams, R. R.
Waters, E. T. See Pryde, J.

Waters, R. B. See Robertson, A. Waters, W. A., halogen substitution products of 4-aminobenzophenone, A., 1299.

nature of the general polarisation effect in aromatic molecules, A., 1365.

Watkin, J. E. See Fagan, T. W.

Watkins, H. R. See Palkin, S.

Watkins, O., lactose metabolism of women, A., 94.

Watney, B. W. A., and Watney, J. L., recovery and drying of solid matter from distillery wash and other liquids, (P.), B., 619. Watney, J. L. See Watney, B. W. A. Watson, C. B. See Carr, R. H.

Watson, D. J., use of pulverised coal as a fuel for periodic kilns, B., 518.

Watson, E. E. See Dimond, E. G.

Watson, F. J., diphenylamine as indicator in the titration of iron with dichromate, A., 286. potentiometer, A., 903.

determination of manganese by the Volhard method, B., 753.

Watson, F. W. See Cooper, R. A.
Watson, H. B., and Gregory, C. E., interaction of bromine with acctic anhydride. V. Bromination and chlorination compared; some properties of acetic chloroacetic anhydride, A., Î039.

Watson, H. B. See also Hughes, E. D. Watson, H. C. See Waddell, M.

Watson, II. E., and Menon, A. S., electrical conductivity of thin oil films. I. General nature of the phenomenon, B., 361.
Watson, H. E. See also Joglekar, R. B., Mudbidri, S. M., and

Rao, S. V. R.

Watson, H. L. See Brit. Thomson-Houston Co., Ltd.

Watson, J., assay for platinoids in ores, B., 212.

Watson, J. C., and Knight Corporation, B. B. & R., cross-dyeing of cellulose fabric, (P.), B., 555\*.

Watson, R. V. See Weatherby, L. S. Watson, W. N. See Stevens, R. H.

Watson, W. W., heat of dissociation of diatomic hydride melecules, A., 1136.

rotational instability and uncoupling of the electronic orbital angular momentum from the axis in diatomic molecules, A., 1360.

Watson, W. W. See also Sponer, (Miss) H.

Watson-Waddell, Ltd. See Waddell, M.

Watt, J. A., compound glass sheets, (P.), B., 284. Watters, A. J. See Read, J.

Watts, A. S., firing of ceramic ware, (P.), B., 852.

porcelain product, (P.), B., 919.

Watts, G. E. See Imperial Chem. Industries, Ltd.

Watts, G. W., and Standard Oil Co., distillation [of hydrocarbon oil], (P.), B., 46.

Watts, H. G., and Imperial Chemical Industries, Ltd., destructive hydrogenation of carbonaceous materials, (P.), B., 546. Watts, H. G. See also Mathias, E., and Rule, A.

Watts, R. C., sources of vitamin-C in India, A., 1111.

Watzl, E., superchlorination and subsequent dechlorination over carbon of water for municipal supply, B., 342. Watzl, E.J. See Küttel, K.

Waugh, D. D. See Coron, B. B. Wayne, T. B. See Varnau, B. H. Weatherby. See Bazzoni, C. B.

Weatherby, B. B., determination of the wave-length of the Ka line of carbon, A., 123.

Weatherby, B. B. See also Gehman, S. D. Weatherby, L. S., Yontz, J. E., and Watson, R. V., vitamin-A content of avocados, B., 995.

Weaver, E. W. See Hepburn, W. M.

Weaver, J. B., and Gyro Process Corporation, apparatus for treating [cracking] hydrocarbon oils, (P.), B., 669. Webb, C. N. See Conant, J. B.

Webb, E. See Boissevain, C. H. Webb, G. E. See Koehring Co.

Webb, H. W., and Messenger, (Miss) H. A., persistence of  $\lambda 2537$ in mercury at low pressures, A., 480.

Webb, H. W. and Wang, S. C., excitation of sodium by ionised mercury vapour, A., 480.
Webb, H. W. See also Jones, C. W. H.
Webb, W. W. See Allmand, A. J.

Webber, H. A., cellulose from corn [maize] stalks, B., 388. Weber, A., Höppner, H., jun., and Welch, H., surface-treatment of celluloid articles to render the same practically uninflammable, (P.), B., 1011.

Weber, E. Sec Kaufmann, H. P.

Weber, F. See Grasselli Dyestuff Corporation, I. G. Farbenind.

A.-G., and Rassow, B.

Weber, F. C., Randall, W. H., and Fleischmann Co., maltose products, (P.), B., 866.

Weber, F. W., catalyst, (P.), B., 597.

Weber, H., and Heidepriem, C., behaviour of aromatic amines in the organism, A., 843.

Weber, H. See also Willstätter, R.

Weber, H. C. P., and Westinghouse Electric & Manufacturing

Co., means for preventing explosions, (P.), B., 25. soldering [of aluminium], (P.), B., 134. manufacture of phthalic glycerido resin, (P.), B., 903\*. Weber, H. H., and Ammon, R., stereochemical specificity of liver- and pancreas-lipase, A., 352.

Weber, H. H., and Nachmansohn, D., independence of protein hydration and protein ionisation, A., 395.

Weber, H. H. See also Rona, P.

Weber, H. M., and Ellis-Foster Co., composition of matter containing a cellulose derivative, (P.), B., 168. plastic resinous material and its manufacture, (P.), B., 256.

plasticised moulding composition, (P.), B., 948.

Weber, I. E. See Laporte, Ltd., R.

Weber,  $J_{\cdot \cdot}$ , Hauser,  $H_{\cdot \cdot}$ , and Aluminium-Ind. Akt.-Ges., production of aluminium, (P.), B., 480\*.

Weber, K. See Fink, H.

Weber, L., extraction of oils and resins from hops; drying of hops, (P.), B., 299.

Weber, L. J., factors affecting solubility, A., 998.
Weber, L. J., and Neugebauer, H., theoretical aspects of the Traube-Whang phenomenon, A., 134.

Weber, W., and Jacobi, M., purification of chemicals [used in

preparation of per-salts, etc.], (P.), B., 940\*.

Webster, H. A., and Schuler, E. T., apparatus for producing synthetic hydrocarbons and alcohols [from natural gas], (P.),

Webster, H. C., photographic measurement of the relative intensities of the  $La_1$ ,  $a_2$ ,  $a_3$  lines of silver, A., 493.

spark satellites of the La lines of silver, A., 493.

Webster, J. E., nitrogen metabolism in the soya bean, A., 612. iodine value of fatty acids from plant phosphatides, A., 1112. effects of storage on alcoholic extracts of plant tissues; amino-

acid changes, A., 1346.

Webster, T. A., and Bourdillon, R. B., absorption spectrum of

vitamin D, A., 236.
Webster, T. A. See also Bourdillon, R. B., King, Harold, and Rosenheim, O.

Wedekind, E., autoracemisation, A., 518.

Wedekind, E., and Bruch, E., action of colloidal calcium fluoride and mercurous chloride on Aspergillus niger, A., 849.

isomerism of substituted aromatic phenacylamines; (stereo-chemistry of the saturated tervalent nitrogen atom), A., 927. Wedekind, E., and Katz, J. R., lignin. I. Chemical and physical

behaviour of phenol-lignins, A., 799.

Wedekind, E., and Maiser, G. L., asymmetric nitrogen atom. LVI. Rates of transformation of stereoisomerides which simultaneously contain an asymmetric nitrogen and carbon atom; parallel to the true autoracemisation of "nitrogen-active" ammonium salts, A., 194.

rotation-dispersion of optically active ammonium salts, A.,

Wedekind, E., and Schicke, W., constituents of corn-cockle seed.

II. Githagenin and githaginic acid, A., 857.

Weech, A. A., and Michaelis, L., permeability of membranes. VI. Mensuration of the dried collodion membrane (calculation of dimensions and relations to certain biological membranes), A., 87.

permeability of membranes. VIII. Behaviour of dried collodion membrane towards bivalent cations, A., 392.

Weech, A. A. See also Green, A. A.

Wegelin, G., production of active charcoal, (P.), B., 505. Wegener, W. See Leuchs, H.

Wegerich, A., ionisation method for the examination of corpuscular rays and its application to the detection of atomic particles, A., 486.

Wegscheider, R., makite and hanksite, A., 673.

light- and dark-reactions involving reversible and consecutive reactions, A., 776.

photochemical transformation of o-nitrobenzaldehyde, A., 895. Wehmhoff, L. See Levine, A. A.

Wehner, O. See Noack, K.

Wehrli, H. See Karrer, P. Webrli, S. See Staudinger, H.

Wehrmann, a source of error in the carbon balance [of gasproducer tests], B., 155. Wehrmann, O. See Gehring, A.

Wei, H. R., analysis of the fine structure of  $D_3$  line of helium, A., 964.

Weich, H. See Weber, A. Weichelt, C. F. C. See Vogel, E. O. Weicher, O. See Arendt, G. Weichherz, J., emulsions. I. Influence of soap content of both phases on the [stability of] the emulsion, A., 260.

Weichherz, J., emulsions. II. System xylene-phenol-sodium oleate-water, A., 1379.

determination of potassium iodide in tincture of iodine according to D.A.B. VI., B., 263.

Weichherz, J. See also Nord, F. F. Weichlein, W., manufacture of vaccines, (P.), B., 454.

Weichmann, H. K. See Fischer, Hans.

Weichselfelder, T. [with Kossodo, M.], nickel hydride, NiH2, A.,

Weickmann, A. See Reindel, F.

Weidenhagen, R., specificity of enzymic fission of maltose, A.,

enzymic fission of sucrose. II., A., 352.

specificity and mechanism of action of the sugar-hydrolysing enzymes, A., 722.
Weidenhagen, R. Sce also Grasselli Dyestuff Corporation.

Weidlnger, A. See Gränacher, C.

Weidlich, R. See Sabalitschka, T. Weigert, F., photodichroism and photoanisotropy. I. Fundamental phenomena and definitions. II. Fundamental effects of induced photodichroism and experimental method, A., 871.

photodiehroism and photoanisotropy. Ill. Quantitative measurement of induced photodichroism, A., 894.

photographic sensitivity of photographic layers, B., 959.

Weigert, F., and Elvegard, E., photodichroism and photoanisotropy. IV. Colour selectivity of photochloride, A., 1248.

Weigert, F., and Lühr, F., photographic emulsions, B., 73.
determination of ripening silver in photographic emulsions,

Weigert, F., and Nakashima, M., photodichroism and photo-anisotropy. V. Colour selectivity in dye systems, A., 1248. colour efficiency of artificial retina, A., 1360.

Weigert, F. See also Elvegard, E.

Weigert, J., and Fürst, F., value of increasing applications of nitrogen to different species of winter rye, B., 447.

utilisation of increasing applications of nitrogen by various species of winter wheat, B., 654.

utilisation of increasing applications of nitrogen by different varieties of summer barley. III., B., 830.

utilisation of increasing applications of nitrogen by different varieties of oats, B., 865.

Weigl, A., polarisation of light from hydrogen canal rays in an electric field, A., 115.

Weil, A., influence of formalin fixation on lipins of central nervous

system, A., 1329. Weil, J. A., Rawlinson, H., and Imperial Chemical Industries, Ltd., manufacture of ammonium vanadate and vanadium

pentoxide, (P.), B., 94. Weil, K. See Peters, K.

Weil, L., production of baking powder mixtures with acid endreaction, (P.), B., 834.

powder for foods, etc., as, e.g., baking powder, (P.), B., 1014. production of lasting, storable carbon dioxide developing

Weil, R. See Soc. anon. Assoc. Parisienne pour l'Ind. Chim.

Weil, Rudolf, and Landsberg, M., method of action of the thyroid hormone, A., 725.

method of action of the thyroid hormone. II. Serum-proteases, A., 1343.

Weil, S., Langiert, J., and Kassur, A., ureides of brominated valeric acids, A., 1049.

Weiland, H. J., Gubelmann, I., and Newport Co., separation of a-naphthylamine from a mixture of a- and  $\beta$ -naphthylamines, (P.), B., 973.

Weiland, H. J. See also Gubelmann, I.

Weiler, G. See Henius, K.
Weller, J., magneto-optical determination of the intensity of the first two members of the principal series of potassium and the vapour pressure of potassium, A., 365.

Weiler, J. F. See Haggerty, C. J.

Weiler, M. See I. G. Farbenind. A.-G.

Weill, P. See McKenzie, A.

Weimarn, P. P. von, jellies and gelatinous precipitates, A., 137. dispersoidal synthesis of gold by means of alkaline form-aldehyde solutions, A., 504, 760, 1142.

colloidal solutions of practically insoluble gold compounds and

their transformation to gold sols, A., 504. dispersoidological investigations. XXIV. Dispersoidology of gold, A., 644.

Weimarn, P. P. von, structure of colloids, A., 1004. crystal disintegration and formation, A., 1368. dispersoidological investigations on latex, B., 65. gelatinisation of vultex, B., 65.

Weimer, R., enamelling composition, (P.), B., 474. Weimers, W. See Siemens-Schuckertwerke A.-G. Weinand, K. See Grasselli Dyestuff Corporation.

Weinberg, K. See Kranse, E.

Weinberger, W., and Jacobs, M. B., comparative precipitation method for the qualitative identification of each of the common gums, B., 260.

Weindel, A., aluminium chamber oven for the [laboratory] lowtemperature carbonisation of bituminous material, B., 383. coke ovens and chamber ovens, (P.), B., 464.

Weindel, A., and Zeche M. Stinnes, production of lubricating oils and phenols from coal tar, (P.), B., 880. separation of oil from coal tar, (P.), B., 916.

Weiner, P. See Simon, A.

Weingand, R. See Wolff & Co. Kommandit-Ges. auf Aktien. Weingarten, N. See Valko, E.

Weinhaus, H., and Nahme, H., constituents of dwarf pine oil, B., 1049.

Weinland, R., and Hübner, W., mixed oxalato-fluoro-, etc. -anions of tervalent chromium, iron, antimony, and bismuth, A., 424. Weinland, R., and Rein, K., ferric oxalate and ferric oxalate perchlorate, A., 424.

Weinmann, F, silver salts of esters of hexosemonophosphoric acids, A., 422.

sulphatase. X., A., 471.

preparation of d-glycuronic acid from gum arabic, A., 910.

Weinholdt, H. See Auwers, O. von. Weinstein, P., determination of the degree of heating of milk, B., 374.

Weintz, J., and Strong, Carlisle, & Hammond Co., electric furnaces, (P.), B., 61.

Weir, Ltd., G. & J., and Sim, J., de-aëration of feed water for boilers, (P.), B., 342.

Weisberg, S. M. See Keenan, G. L.

Weise,  $\bar{E}$ , methods of heating coke ovens, B., 231.

Weise, K. See Schmid, Franz.
Weise, P. See I. G. Farbenind. A.-G.
Weiser, H. B., and Cunningham, G. E., adsorption of ions and the physical character of precipitates, A., 390.

Weiser, H. B., and Radcliffe, R. S., physical chemistry of colour lake formation. IV. Red eongo acid and congo-red lakes,

Weiser, S., and Zaitscheck, A., press- and extraction-processes in the treatment of sunflower seed [for feeding-stuff], B., 409. Weiske, F., influence of soil reaction on the development of

meadow plants, B., 905.

Weiss, C., proteases and antiproteases of pleural exudates, A., 345. measurement of the relative intensities of two emission lines

(1S-3P) and 2S-3P) from sodium atoms, arising from the same initial state, as regards the ratio of the corresponding transition probabilities, A., 480.

Weiss, E. See Hollo, J.

Weiss, Ernst. See Karrer, P., and Pauli, W.

Weiss, F., detection of isopropyl alcohol in brandy by Griebel's micro-beaker method, B., 619.

Weiss, F. See also Griebel, C.

Weiss, H., and Vellinger, E., interfacial tension between mineral oils and aqueous solutions; influence of time and  $p_{\rm H}$ , A., 503.

interfacial tension between mineral oils and aqueous solutions; influence of degree of refining and degree of alteration of oils, A., 641.

Weiss, H. F., and Wood Conversion Co., food product, (P.), B.,

Weiss, J. M., Downs, C. R., and Weiss & Downs, Inc., soap paste, (P.), B., 785.

Weiss, K. See Schneider, Wilhelm.

Weiss, M., analysis of colouring matter of urine. VI., A., 91. colouring matters of urine. VII. Spectrometric determination of urobilin, A., 716.

Weiss, M. L., and Dovan Chemical Corporation, vulcanisation of rubber, (P.), B., 652.

Weiss, P., magnetic moment of the complex ions of the iron group, A., 752.

Weiss, P., and Foëx, G., atomic moments, A., 5.

Weiss, P., and Forrer, R., saturation magnetisation of ferrocobalts and atomic moments of iron and cobalt. A., 1369.

Weiss, R., [with Katz, J. L., Handl, W., and Melzer, J. L.],

weiss, R., and Katz. J. L., triphenylmethane compounds with linked benzene nuclei. IV. Preparation of an iminophenyleneacridine derivative; dependence of colour on the nature of the atoms completing the ring, A., 77. Weiss, R., and Knapp, W., action of phthaloyl chloride on p-tolyl

methyl ether and p-tolyl methyl sulphide, A., 186.

Weiss, R., and Kratz, A., synthesis of coumarin derivatives. II., A., 821.

Weiss, R., and Kratz, S. R., action of magnesium o-tolyl bromide on the dilactone of benzophenone-2:2'-dicarboxylic acid, A., 187.

Weiss, R., and Merksammer, E., new synthesis of coumarin derivatives, A., 73.

Weiss, R., and Reichel, J., triphenylmethane derivatives with linked benzone nuclei. V. Diketodimethylenetriphenylcarbinol, A., 1445.

Weiss, S. See Elias, H., and Popper, L. Weiss & Downs, Inc. See Weiss, J. M. Weissbach, K. See Braun, J. von.

Weissbein, S., production of creams having curative properties, (P.), B., 443.

Weissberger, A., Mainz, H., and Strasser, Emmerich, auto-oxidation of benzoin in alkaline solution, A., 1301.

Weissberger, A., and Sängewald, R., electric moments of aromatic p-diamines, A., 1217.

Weissberger, A., and Williams, J. W., electric moments of some substitution products of benzene and diphenyl, A., 866.

Weissenberg, K., molecular theory of crystals, A., 247.

translation lattice of cellulose hydrate, A., 493.

lattice determination in polycrystalline aggregates, A., 986. translation lattice of cellulose hydrate, A., 988.

Weissenberger, G., and Piatti, L., monel metal as tower packing, B., 99.

recovery of sulphur dioxide from waste gases, B., 392. Weissenborn, A. See Knorr, A.

Weissflog, J., apparent storage of carbamide in mycotrophic plants, A., 1113.

Weissweiler, A., measurement of the relative viscosities of gases and vapours, A., 873.

Weith, A. J., and Bakelite Corporation, manufacture of phenolic condensation products, (P.), B., 404.

Weitz, E., theory of [the colour of] quinhydrones, A., 190. Weitz, E., [with Stamm, H.], indirect analysis of a chemically single phase in a system composed of two phases, A., 51 I.

Weitz, J., Fils de, rotary mixing machines [for concrete, etc.], (P.), B., 646.

Weizel, W., band spectrum of helium, A., 363. new bands in the helium spectrum, A., 363.

electron terms in the singlet systems of the fine line spectrum of hydrogen, A., 1115.

band spectra of light molecules. I. Spectra of helium and hydrogen, A., 1116.

Weizel, W., and Pestel, E., band spectrum of helium, A., 859. regularities in the band spectrum of helium; vibration quanta of He<sub>2</sub> and He<sub>2</sub>+, A., 964.

Weizmann, and Haskelberg, L., preparation of the glyceryl esters of the aliphatic amino-acids, A., 1048.

Weizmann, A. E. See Stadnikov, G. L. Weizmann, M., Haskelberg, L., and Malkowa, S., synthesis of

mixed fatty and amino-acid glycerides, A., 1269.

Welch, C. E. See Richardson, L. R. Welch, P. S., physiology of insects; metabolism, A., 599. Weldin, J. C., substitute for beer wort as yeast medium, B.,

Weldon, M. D. See McCool, M. M. Weldrics (1922), Ltd., and Anderson, A. D., electrodes for arcwelding, etc., (P.), B., 330.

Welker, W. F. See Andrews, E.

Wellman, N. T., and General Chemical Co., roasting furnace,

(P.), B., 856.
Wells, F. G., hydrothermal alteration of serpentine, A., 904.

Wells, L. S., reaction of water on calcium aluminates, B., 173.

Wells, P. E. See Brit. Hard Rubber Co., Ltd. Wells, P. V. See Exton, W. G.

Wells, R. C., origin of helium-rich natural gas, A., 1263.

Weils, S. D., cellulose from cereal straws, B., 388.

treatment of fibrous material, for example, for the manufacture of paper, (P.), B., 1043.

Wells, S. D., and Paper Mill Labs., Inc., softening of vegetable fibres, (P.), B., 638.

Wells,  $\hat{S}$ .  $\hat{D}$ . See also Rue,  $\hat{J}$ .  $\hat{D}$ .

Welo, L. A., absence of change in magnetic susceptibility with crystallisation in strong magnetic fields, A., 1133.

fused paramagnetic salts, A., 1224. Welsch, A., "avortin," A., 469. Welsh, H. D. See Hendrick, J.

Welter, A., manufacture of dry, non-caking, readily-soluble soap in the form of threads, (P.), B., 364. bleaching of fatty acids, (P.), B., 565.

production of soap, (P.), B., 728\*

production of [non-caking] soap threads, (P.), B., 988. Weltistova, N. See Jakimov, P.

Weltmann, O., effect of dextroso on alimentary galactosuria, A., 1192.

Weltmann, O., and Jost, F., adsorption of bilirubin by protein, A., 837.

Weltzien, W., and Götze, K., dyeing of artificial silk. IV. Conditions for uniform dyeing of artificial silks (except acetate silk) with substantive dyes, B., 1012.

Wendehorst, E., molybdic acid-selenic acid, A., 40. [solubility influences and quantitative analysis], A., 1031.

Wendel, R. M., centrifugal concentrator, (P.), B., 626. Wendt, G. von, biology of iodine compounds. I. Effect of cuprous

iodide in avitaminosis-A and -D, A., 1496.

Wenger, P. See Duparc, L. Wenk, B. See Grasselli Dyestuff Corporation, I. G. Farbenind. A.-G., and Rabe, P.

Went, F. W., root-forming substance, A., 612.

Went, S., and Drinker, C. K., determination of blood volume in small animals, A., 713.

Wentzel, W. See Braune, H.

Werder, J., test for eider and other fruit juice in wine, B., 619.

Werkman, C. H., microbiological death rates, A., 220.

Werner, E. E., and Siedhoff, W., technological method for the study of yeast, B., 656.

Werner, G. See Braun, J. von.

Werner, H., stability of coarse particles in solutions. IV. Formation and removal of liquid sheaths in suspensions of Bolus alba; reversible sol-gel transformation; thixotropism, A., 878, 1234.

Werner, J., photo-olectric behaviour of salts, A., 1217.

Werner, K., and Engelmann, H., properties of acetone-soluble

acetylcellulose, B., 468.
Werner, K., and "Progress" Ges. für Textilmaschinen m.b.H., fluxes for joining metals by welding, soldering, etc., (P.), B., 944. Werner, M. See Droste, W. H.

Werner, Othmar, apparatus for incinerating plants for microscopical examination of the ash, B., 260.

Werner, Otto, dipole moment of antimony trichloride, A., 980. dipole moment of hydrocyanic acid and of some nitriles, A.,

range of validity of the method of dilute solutions for the determination of dipole moments, A., 1217.

temperature variation of the dipole moment, A., 1217.

Werner, Otto. See also Walden, P.

Wernicke, R., and Modern, F., oligodynamic action of silver, A., 1109, 1494.

colloidal gold for use in Lange's reaction; use of electrodialysed water in preparation of gold sols, A., 1332.

purification of anticarbuncle serum, A., 1493.

Wernimont, G. See Quinn, E. L.

Wertenstein, L.,  $\beta$ [-particle] recoil, A., 620.

Wertheimer, E., regulation of metabolism. X. Glycogen in adipose tissue and the possibility of conversion of fat into carbohydrate, A., 94.

influence of adrenaline in gluconeogenesis, A., 474.

heat equilibrium and temperature, A., 873.

sugar combination and connected synthetic processes by yeastcells, A., 1199.

Wertz, L. S., and Wertz Co., treatment [waterproofing] of masonry surfaces, (P.), B., 920. Wertz Co. See Wertz, L. S.

Wesche, H. See I. G. Farbenind. A.-G.
Wescott, E. W., and Comstock & Wescott, Inc., copper oxide electrodo and its manufacture, (P.), B., 527.

Wescott, W. B., and Rubber Latex Research Corporation, utilisation of [rubber] latex and product thereof, (P.), B., 139. manufacture of rubber articles, (P.), B., 295\*.

manufacture of reinforced hard rubber, (P.), B., 530. Wescott, W. W. See Schiller, J. F.

Wesenberg, R., corrosion phenomena on aluminium sheet, B., 779.

Wesselkock, H. See Schenck, R.

Wessely, F., and Demmer, E., constitution and properties of fraxin, A., 298.

Wessely, F., Kemm, E., and Mayer, J., polypeptide N-carboxylic acids, A., 301.

Wessely, F., and Mayer, J., carbonylbisamino acids and their transformation products. II., A., 193.

Wessely, F., and Sturm, K., constitution of daphnin, A., 298.

constitution of phloridzin, A., 1452.

West, A. P. See De Santos, I. West, C. See Kidd, F. West, D. W. See Levy, L. A.

West, E., and West's Gas Improvement Co., Ltd., vertical retorts for carbonisation of coal and like materials, (P.), B., 705. coke extractors for vertical retorts for distillation of coal, (P.),

[coke-extractor gear for] coke chambers of vertical retorts for carbonisation of coal, (P.), B., 971.

West, E. See also West,  $\hat{F}$ .  $\hat{J}$ .

West, E. S., Scharles, F. H., and Peterson, V. L., determination

of true sugar in blood, A., 714. West, F. J., West, E., and West's Gas Improvement Co., Ltd., coke extracting mechanism for vertical retorts for carbonisation of coal and the like, (P.), B., 805.

West, G. H. See Brit. Amer. Laundry Machinery Co., Ltd., and Pike, R. D.

West, J. See Alston, N. A., and Bragg, W. L. West, R. See Dakin, H. D.

West, W., Müller, Ralph H., and Jette, E., fluorescence and photo-sensitisation in aqueous solution. I., A., 8.

West, W. See also Jette, E.

Westberg, S., reduction of oxides to metallic form, (P.), B., 58. reduction of oxides or oxide ores, (P.), B., 686. refining metals and alloys, (P.), B., 856.

Westbrook, L. R., electroplating of cadmium from cyanide baths, B., 560.

Westbrook, L. R. Seo also Grasselli Chem. Co.

Westcott, L. E., and Wise, E. C., failure of a diabetic patient to utilise dried artichoke powder, A., 1331.

Westen, H. A. van. See Waterman, H. I.

Westenberg, L., Congo copal oil, A., 818. Westenbrink, H. G. K., and Arons, P., automatin. I., A., 1494. Westenbrink, H. G. K., Pieters, J. A. A., and Pieters, J. J. L., determination of  $p_{\rm H}$ , particularly of blood, using the antimony electrodo and by colorimotric methods, A., 1348.

Westenbrink, H. G. K. See also Jaeger, F. M.

Westendiek, F. C See Wilcox, H. G., and Williams, F. J. Westerholt, F. Seo Heike, W.

Western Cartridge Co. See O'Neil, A. S.

Western Electric Co., Inc., olectrodeposition of [iron-nickel] alloys, (P.), B., 251.

manufacture of [antimonial lead] alloys, (P.), B., 480. glow-discharge lamps, (P.), B., 689.

electrolytic condenser, (P.), B., 754.

Western Electric Co., Inc. See also Andrews, J. W., Buckley, O. E., Elmen, G. W., Harris, J. E., Hull, S. M., Le Boutillier, A., Lowry, H. H., Reeve, H. T., Rinck, F. B., Schumacher, E. E., Seljesaeter, K. S., Siegmund, H. O., and Wheeler, E. B. Western Gas Construction Co. Soe Andrews, C. W.

Western Gold & Platinum Works. See Overmire, C. A.

Western Union Telegraph Co. See Curtin, L. P.

Westgren, A., and Almin, A., packing of atoms in alloys, A., 1126.

Westgren, A., Hägg, G., and Eriksson, S., X-ray analysis of the copper-antimony and the silver-antimony systems, A., 1139. Westgren, A., and Phragmen, G., X-ray studies on alloys, A.,

Westhaver, J. W. See Brewer, A. K.

Westinghouse Electric & Manufacturing Co., furnaces, (P.), B., 77. Westinghouse Electric & Manufacturing Co., Elsey, H. McK., and Krogh, A. T., thermionic cathode, (P.), B., 859.

Westinghouse Electric & Manufacturing Co., and Zworykin, V., apparatus for sorting or classifying articles by means of light,

(P.), B., 528.

Westinghouse Electric & Manufacturing Co. See also Baker, J. F., Brace, P. H., Brown, A. L., Carpenter, C. H., Cochran, P. B., Colby, O. A., Diederichs, W. J., Fatkin, E. S., McCulloch, L., Mains, C. J., Rathbun, J. P., Rodman, C. J., Schmitt, G., Schneider, S., Schnept, J., Silberstein, J., Spooner, T., Stickney, F. S., Tamale, K., Weber, H. C. P., and Woodson, J. C.

Westinghouse Lamp Co., and Iredell, C. V., manufacture of

electron-emitting bodies, (P.), B., 481.

Westinghouse Lamp Co. See also Gero, W. B., Gustin, D. S., Hallock, G. W., Lorenz, C. F., MacRae, D., Marden, J. W., O'Neill, G. D., Ramage, J. H., Rentschler, H. C., and Rich,

Westman, A. E. R., equations and tables for shrinkage, expan-

sion, and design calculations [in ceramics], B., 19. use of fused silica as raw material in the manufacture of porcelain, B., 19.

effect of reducing gases on the transverse strength of fireclay bricks, B., 55.

prediction of service value [of ceramic materials] from laboratory test data, B., 519.

capillary suction of some ceramic materials, B., 940.

Westman, A. E. R., and Mills, R. G., waste-heat dryer calculations and charts, B., 343.

Westman, A. E. R. See also Parmelee, C. W.

Weston, E. B., Clark, W. G., and Terre Haute Paper Co., manufacture of waterproof straw pulpboard, (P.), B., 242.

Weston, F. R. See Bone, W. A. Weston, P. E., and Adkins, H., reactions of allyl alcohol over aluminium and zine oxido catalysts, A., 1164. reduction of cinnamaldehydo to β-phenylpropaldehyde with

alcohols, A., 1177. Westphal, K. See Handovsky, H.

West's Gas Improvement Co., Ltd. See West, E., and West,

Wetherbee, H. E., Grant, R. F., and Hanna, H. M., treating and forming artificial fuel, (P.), B., 43. treatment of artificial fuels, (P.), B., 704.

Wetherbee, H. E. See also Grant, R. F.

Wetter, W. See Hüttenwerke Trotha A.-G. Wetzel, K. See Ruhland, W.

Wever, F., relation between the influence of the elements on the polymorphism of iron and their place in the periodic system, A., 745.

influence of alloying elements on the polymorphism of iron, B., 599.

Weyer, E. R., [butyl alcohol-acetone] fermentation, (P.), B., 793.

Weyer, P. See Krauss, F.

Weygand, C., polymorphism of organic substances. I., A., 1072. polymorphism of organic compounds. II. Prognosis of polymorphism and systems of polymorphs, A., 1451.

Weygand, C. [with Bauer, E., and Hennig, H., isomeric relationships in the chalkone series. VI. Relationships between polymorphism and othylenic isomerism, A., 564.

Weygand, C., and Baumgärtel, H., constitution of  $\beta\gamma$ -diketones. II. Tendency and direction of enclisation, A., 542.

natural system for polymorphic forms of p'-methylchalkone [p-tolyl styryl ketone]; isomeric relationships in the chalkone sories. VII., A., 815.

Weyl, H., gravitation and the electron, A., 739.

Weyl, P., blood-sugar regulation in mammals. III. Effect of higher temperatures on blood-sugar, A., 588.

Weyl, P. See also Kisch, B.

Weyland, H., Deichsel, S., and Winthrop Chemical Co., Inc., manufacture of fatty acids, (P.), B., 333\*.

Weymouth, A. A. See Goodspeed, G. E. Whaley, W. L. O., rapid determination of alcohol, A., 1189. Whang, S. H. See Traube, J.

Whatmough, W. H., apparatus for the production and dispersion of solids in liquids, (P.), B., 268. production of dispersions of solids in liquids, (P.), B., 876.

Whatmough, W. H., and Standard Products Corporation, apparatus for production of dispersions of solids in liquids, (P.), B., 229\*.

Wheaton, H. J., and American Doucil Co., base-exchange compound and its manufacture, (P.), B., 55\*

Wheaton, H.J. See also Hilditch, T.P.

Wheeler, A. E., purification of [copper] leaching solutions and recovery of acids or dissolving agents, (P.), B., 439.

Wheeler, A. S., and Park, J. G., p-cymene. XII. 2-p-Cymyl-4semicarbazide and derivatives, A., 1438.

Wheeler, A. S., and Thomas, C. L., p-cymene. XI. p-Cymyl-2carbithionic acid, A., 62.

p-cymene. XIII. 2-p-Cymylhydrazine and derivatives, A., 1438.

Wheeler, E. B., and Western Electric Co., Inc., insulated wire, (P.), B., 62.

Wheeler, F. See Dale, A. J., and Troop, R. S.

Wheeler, G., colouring the image on photographic plates, films, etc., (P.), B., 74\*.

Wheeler, G. A. See Goldberger, J. Wheeler, H. F. See Bird & Co.

Wheeler, O. E., colour photography, (P.), B., 303.

Wheeler, R. V., higher hydrocarbons from methane, B., 7. some forms of carbon and their reactivity, B., 309.

Wheeler, R. V., and Brass, J., burners for powdered or other fuel, (P.), B., 746.

Wheeler, R. V., Pehrson, A. P., and Pehrson, A. H., heat treatment of oil shale or similar materials, (P.), B., 842.

Wheeler, R. V., and Wood, W. L., pyrolysis of methane, B., 88. Wheeler, R. V. See also Anglo-Persian Oil Co., Ltd., Burgess, M. J., Coward, H. F., Ellis, O. C. de C., Evans, M. M., Francis, W., Grice, C. S. W., Hague, E. N., Holroyd, R., Kirkby, W. A., Mason, T. N., Maxwell, G. B., and Payman, W. Whelan, P. F. See Leonard, A. G. G. Whelen, M. S. See Hibbert, H. Wharry, F. T. Seiding and Markette G. S. See Hibbert, H.

Wherry, E. T., acidity relations of the Sarracenias, A., 1497. Whiddington, R., electron collisions with molecules and resultant

quantum losses, A., 1357.

Whiddington, R. See also Jones, H.

Whincop, J. R. See Pollard, A. G.

Whipple, G. H., Groth, A. H., and Robscheit-Robbins, F. S., influence of diet on muscle-hæmoglobin, A., 211.

Whipple, G. H. See also Kennedy, R. P., and Sperry, W. M. Whipple, M. C., Fair, G. M., and Klein, L., effect of pressure on sludge digestion, B., 379.

Whitaker, D. M. See Taylor, C. V. Whitaker, F. A., new method of direct firing glazed ceramic bodies, B., 247.

Whitaker, J. W., rapid method for the determination of nitrogen

in coal, B., 309.

Whitby, G. S., and Gallay, W., effect of temperature on viscosity and ease of precipitation of sols of cellulose acetate and rubber, A., 394.

Whitby, G. S., McNally, J. G., and Gallay, W., organophilie colloids, A., 1379.

Whitby, L., reaction between ferric sulphate solution and cuprous sulphide, A., 283.

White M, M. See also Vernon, M. M. M. M. Whiteomb, M. M. Also devices for the commercial protein-testing laboratory, B., 659.

Whitcomb, W. O. See also Johnson, A. H. White, A., Wallace, W. M., Stewart, J., Stewart, R., and White, J., [discharge valve for paper] pulp strainers of the drum type, (P.), B., 595.
White, A. C., distribution of various phosphoric acid fractions in

different portions of the heart, A., 1191.
White, A. G. See Foster, B. W.
White, A. H., manufacture of fuel gas, (P.), B., 45.

neutralising the alkalinity of water, (P.), B., 152.

purifying the water used for steam-boiler purposes, (P.), B., 190.

hydrated Portland cement as a colloid, B., 395.

White, A. H. See also Partridge, E. P. White, C. B., and Vivatex Processes, Inc., mineral dyeing, (P.), B., 514.

treatment of textile materials, (P.), B., 679\*.

White, E. A., mills for grinding paints, enamels, inks, and other viscous substances, (P.), B., 948.

White, E. C., organic compound of mercury and its manufacture, (P.), B., 577.

White, E. E. See Dunlop Rubber Co., Ltd. White, F. D. See Cameron, A. T.

White, G. D., and Texas Co., treatment of [hydrocarbon] oils, (P.), B., 883.

White, G. N. See Carpenter, S. W.

White, H. E., spectral relations between certain iso-electronic systems and sequences. I. Ca I, Sc II, Ti III, V IV, and Čr v., A., 617.

spectral relations between certain iso-electronic systems and sequences. II. Sc i, Ti ii, V iii, Cr iv, and Mn v, A., 734.

White, H. E., spectral relations between certain iso-electronic systems and sequences. III. Ti 1, V 11, Cr 111, Mn 1v, and Fe v, A., 965.

spectra of doubly-ionised vanadium, V III, and triply-ionised

chromium, Cr Iv, A., 1351. White, H. E. See also Gibbs, R. C.

White, H.J., and Bethlehem Milling Co., treatment of grain, (P.),

White, J., [apparatus for] manufacture of road-making materials, (P.), B., 435.

White, J. See also White, A. White, J. D. See Richards, T. W.

White, J. H., and Bell Telephone Laboratories, Inc., metallurgical

process [for nickel], (P.), B., 288.

White, J. R., and Leeds, H., production of yeast, (P.), B., 1029.

White, W. A., heat-transferring devices, such as air preheaters, (P.), B., 739.

pulverisers, (P.), B., 875. White, W. P. See Perley, G. A.

White Motor Co. See Kinney, Le B. W. Whitehead, R. W., and Barlow, O. W., influence of vitamins-A, B, D, iron, copper, ox muscle, and liver on the course of and regeneration from the anamia of rice disease, A., 1344. Whitehead, W. See Palmer, C. W.

Whitehouse, A. G. R. See Hancock, W.

Whitehouse, J. S., manufacture of bricks and operation of brick kilns, (P.), B., 1016.

brick kilns, (P.), B., 1017.

Whiteley, J. H., coalescence of pearlite, B., 853.
Whitener, J. S., chlorination of coagulated water, B., 341.
Whiting, W. S. See Colas Products, Ltd.

Whitlock Coil Pipe Co. See Jacocks, G. T.

Whitmore, B. G., specific heat of manganese phosphide, A., 386. Whitmore, F. C., Cade, A. R., and Leuck, G. J., p-bromodiethyl-

aniline and mercuric acetate, A., 946.
Whitmore, F. C., and Carnahan, F. L., mercuration of anthra-

quinonedicarboxylic acids, A., 586. Whitmore, F. C., and Culhane, P. J., replacement of carboxyl by mercury in 3-substituted phthalic acids. I., A., 458.

Whitmore, F. C., Hanson, E. R., and Carnahan, F. L., bases and

mercurated anilines, A., 712.

Whitmore, F. C., and Isenhour, L. L., mercurated terephthalic acid, A., 1321.

Whitmore, F. C., and Leuck, G. J., alizarin and mercuric acetate, A., 947.

acetoxymercuric chloride, A., 1169.

mercuration of aurin and attempts to mercurate other triphenylmethane dyes, A., 1322.

Whitmore, F. C., and Thurman, E. N., reactions of organic mercury compounds with organic halides. II., A., 801.

Whitmore, F. C. See also Fox, A. L., Leuck, G. J., and Otterbacher, T.

Whitmore, L. M., and Downing, G. V., water-absorption and penetration tests for sole leather, B., 140.

Whitmore, W. F., and Linehan, R. E., transparent emulsions of some essential oils, B., 957.

Whitmore, W. F. See also Gardner, W. H.

Whitney, J. D., inclastic collisions in mercury vapour, A., 1359. Whitney, L. F., Whitney, W. E., and Rajet Co., impregnated

material [leather], (P.), B., 369.
Whitney, W. E. See Whitney, L. F.
Whittaker, C. M. See Courtaulds, Ltd.

Whittaker, J. M., wave theory of the electron, A., 7.

Whittemore, C. R., production of titanium oxide from titaniferous iron ores, (P.), B., 322.

Whittier, E. O., buffer intensities of milk and milk constituents.

I. Buffer action of caseinogen, A., 1099. Whittier, E. O., and Grewe, E., hydrogen-ion determination in

flour and bakery products, B., 657. Whittier, E. O. See also Rogers, L. O.

Whytlaw-Gray, R. See Patterson, H. S.

Wibaut, J. P., behaviour of gaseous hydrogen halides and unsaturated hydrocarbons in the presence of contact substances, A., 1399.

Wibaut, J. P., and Kam, E. J. van de, behaviour of amorphous carbon and sulphur compared with that of diamond and graphite; the carbon sulphide of Ciusa, A., 896.

Wibaut, J. P., and Lande, L. M. F. van de, formation of amino-pyridine by the action of ammonia on pyridine in presence of catalysts, A., 1313.

Wibaut, J. P. See also Dingemanse, E., Levelt, W. H., and Mendlik, F.

Wiberg, A, determination of adsorptive power of bleaching earths used to decolorise oils, B., 103.

Wiberg, E., constitution of boron hydrides, A., 492, 629.

shell charge and proton migration, A., 1219.
Wichers, E. See Collins, W. D.

Wichert, M., Pospelov, S., and Jakovleva, A., cholesterol metabolism, A., 1101. Wichmann, J. C., and Cactus Rubber Co. of America, manufacture

of rubber-like materials, (P.), B., 990.

Wick, (Miss) F. G., and Carter, (Miss) E., thermoluminescence excited by high-voltage cathode rays, A., 979.

Wick, (Miss) F. G., and Slattery, (Miss) M. K., thermoluminescence excited by X-rays; further experiments on synthetically-prepared materials, A., 1214.

Wickel, F. K., manufacture of wrapping material, (P.), B., 976. Wickenden, L., and Naugle, J. J., invertase preparation and method of preparing and utilising the same, (P.), B., 70. Wickenden, L., and Okell, S. A. W., activating or revivifying carbonaceous material, (P.), B., 45.

Wickenden, T. H. See International Nickel Co. Widdowson, R. R. See Brit. Celanese, Ltd. Widmann, E. See Bergel, F., and Schneider, E.

Widmark, E. M. P., and Orskov, S. L., new micro-burette, A., 109. Widmark, G. E. See Nielsen, N. A. Widmer, G. See Soc. of Chem. Ind. in Basle.

Widmer, O., formation and decomposition of gallic acid, pyrogallolearboxylic acid, phloroglucinolearboxylic acid, and their potassium salts, A., 517.

Widmer, R. See Karrer, P. Wiebe, R. Sec Giauque, W. F.

Wiechmann, E., amino-acid content of the blood in leucemia, A., 344.

hypertension and blood-sugar, A., 717.

Wiechowski, W. Seo Junkmann, K. Wiedemann, E. See Treibs, A. Wiederhold, H., and Naamlooze Vennootschap Nederlandsche Mijnbouw en Handel Maatschappij, manufacture of cyanides, (P.), B., 851\*.

Wiederholt, W. See Liebreich, E. Wiedersheim, V. See Staudinger, H.

Wiegand, G., incrustation of well-borings and its removal by chemical means, B., 761.

Wiegand, W. See Kuhn, R. Wiegand, W. B., and Braendle, H. A., reduction of rubber stressstrain determinations, B., 827.

Wiegel, E., preparation of many-coloured silver sols by means of hydrogen peroxide, A., 643.

mechanism of the catalytic decomposition of hydrogen peroxide on colloidal silver, A., 1150.

Wiegner, G., and Marshall, C. E., coagulation by electrolytes of non-spherical colloidal particles. I. Rapid perikinetic coagulation. II. Slow perikinetic coagulation, A., 393.

Wiegner, G., and Muller, K. W., ionic exchange peculiar to permutit, A., 1142.

Wieland, H., course of [biological] oxidation processes, A., 842.

Wieland, H. [with Chavan, J. J., and Klages, E.], behaviour of alkoxide solutions towards nitric oxide, A., 46. Wieland, H., and Asano, M., sterols from yeast, A., 1200.

Wieland, H., and Bertho, A., mechanism of oxidative processes. XV. Nature of the acetic acid fermentation, A., 219.

Wieland, H., and Dragendorff, O., lobelia alkaloids. III. Constitution of lobelia alkaloids, A., 1085.

Wieland, H., and Drishaus, I., lobelia alkaloids. IV. Synthesis of lobelia alkaloids, A., 1086.

Wieland, II., and Franke, W., mechanism of oxidative processes. XVII. Ratio of oxidation velocities of molecular oxygen and hydrogen peroxide, A., 1148.

mechanism of oxidative processes. XVIII. Activation of hydrogen peroxide by iron, A., 1398.

mechanism of oxidative processes. XIX. Combined autoxidation systems, A., 1399.

mechanism of oxidativo processes. XVI. Rusting of iron, B., 476.

Wieland, H., Franke, W., and Kitasato, Z., fulminic acids. VIII. Constitution of polymerised fulminic acids; erythrocyanilie acid and β-isocyanilic acid, A., 1468.

Wieland, H., Hettche, O., and Hoshino, T., red quinoline dye of Besthorn, A., 76.

Wieland, H., and Kitasato, Z., characteristic reaction of primary aci-nitro-compounds, A., 790.

fulminic acids. IX. Constitution of polymerised fulminic acids; pericyanilie, epicyanilie, and metacyanilic acids, A.,

Wieland, H., and Kloss, H., triphenylmethane derivatives, A., 1053.

Wieland, H., Kosohara, W., and Dane, E., lobelia alkaloids. V Bases accompanying lobeline and the mutual relationships of the lobelia alkaloids, A., 1086.

Wieland, H., and Münster, W., acids obtained from brucine by oxidation with chromic acid, A., 707.

Wieland, H., and Oertel, G., new strychnos alkaloid [vomieine]. I., A., 708.

Wieland, H., and Small, L. F., morphine alkaloids. VI. Thebaizone and other products of ozonolysis, A., 81.

Wieland, K., spectra of mercury, cadmium, and zinc halides, A., 1127.

Wieland, M., manufacture of dichromate-gluc printing plates for hand-printing or press deep printing, (P.), B., 151.

Wielen, P. van der, examination of medicinal substances containing anthraglueosides, B., 1031.

Wieluch, D., stereoisomeric carbonisation theory, A., 13. Wiemann. See Lespieau, R.

Wien, M., deviations from Ohm's law for electrolytes, A., 32. voltage effect in electrolytic conductance with very high fields, A., 401.
Wien, S., and Radio Patents Corporation, photo-electric cell, (P.),

B., 783.

Wienhaus, H., new compounds from oil of turpentine, A., 191. Wienhaus, H., and Leonhardi, H., preparation and properties of new furan compounds, A., 1309.

Wienhaus, H., and Scholz, H., new crystalline compounds from essential oils. I. Bulnesol, a compound occurring with guaiol in guaiacum wood oil. II. Cryptomeradol, a sesquiterpene alcohol from Japanese cedarwood oil. III. Germacrol, a crystalline compound from Bulgarian geranium oil, A., 1308.

Wienhaus, H., and Todenhöfer, K., umbellulone and umbellularia oil, B., 1049.

Wieninger, F. See Lüers, H. Wieninger, F. M., and Lindemann, M., rapid determination of nitrogen, B., 939.

Wierl,  $\hat{R}$ . See Mark, H.

Wiersma, E. C. See De Haas, W. J., and Woltjer, H. R.Wierzuchowska, J. See Marchlewski, L.

Wiese, H., refining of sugar, (P.), B., 734.

Wiese, H., and Anglo-Scottish Beet Sugar Corporation, Ltd., purification of saccharine liquids, (P.), B., 490.

Wiesenthal, K., significance of water movements in a sandy soil in its management, B., 531.

Wiesner, B. P., and Patel, J. S., beta-hormone, A., 609.

Wiessmann, H., determination of the nutrient value of soils by pot experiments, B., 297.

comparison between the culture methods of Mitscherlich and Wiessmann [for determining nutrient values of soils], B., 487.

Wiessmann, H., and Schramm, E., potash and nitrogen manuring of potatoes, B., 143.

nutrient requirement of soils as indicated by the Mitscherlich and Neubauer methods, B., 531.

Wietzel, G. See I. G. Farbenind. A.-G. Wietzel, R. See I. G. Farbenind. A.-G.

Wiger, B. See Boedtker, E.

Wiggin, J. D., Remmes, M. M., and Wiggin's Sons Co., H. B., composition and mould made therefrom, and method of cast-

ing pottery in the mould, (P.), B., 130.

Wiggin's Sons Co., H. B. Se Wiggin, J. D.

Wightman, E. P., fogging by acids and oxidising agents and the

intensification of the photographic latent image, B., 73.

Wightman, E. P., and Quirk, R. F., intensification of photographic latent image, B., 872.

Wightman, E. P. See also Shoppard, S. E. Wightman, G. E., and Bakelite Corporation, manufacture of resinimpregnated sheets, (P.), B., 530.

Wigley, C. G., and Potts, C., disposal of sewage or other waste organic matter, (P.), B., 998.

Wigman, H.J. See Ruzicka, L.

Wigner, E., and Witmer, E. E., structure of diatomic molecule spectra according to the quantum mechanics, A., 117.

Wigner, E. See also Neumann, J. von, and Pólányi, M. 10\*

Wijk, A. van der. See Briner, E.

Wijk, D. J. R. van, the soil solution and its relation to the soil colloids, B., 926.

Wijs, J. J. A., the Wijs method as the standard for iodine absorp-

tion, B., 179, 364\*.

Wikström, E. G. A. See Tekniska Fabr. Jofur, N. I. Bruzelius.

Wikul, M., "tartratecobaltinitrite" [existence of the cobaltyl group], A., 1028.

Wilborn, F., drying of boiled tung oil, B., 824.
Wilborn, F., and Kittler, F., polymerisation of linseed oil in stand-oil formation, B., 947

Wilborn, F. See also Wolff, Hans. Wilbur, S. P., and U.S.L. Battery Corporation, hydrometer device, (P.), B., 193.

Wilcox, H. G., and Westendick, F. C., action of fluorine in enamel smelts, B., 246.

Wilcox, (Miss) K. W., and Bailey, C. R., critical solution temperature phenomena in the ternary system phenol-thymol-water, A., 756.

Wilcox, W. D., manufacture of mixed water-gas and oil gas, (P.), B., 632.

Wild, L. W. See Wild-Barfield Electric Furnaces, Ltd.

Wild, S. V. See Macpherson, H. Wild, W. See I. G. Farbenind. A.-G.

Wild-Barfield Electric Furnaces, Ltd., and Wild, L. W., electric furnaces, (P.), B., 782.

Wilder, F. L., Morris, E., Schiff, E., and King, E. S., treatment of complex minerals containing tin, and copper, etc., and associated metals, (P.), B., 24

separation of gases [sulphur dioxide] or suspended matter from the discharge gas from metallurgical or other furnaces, (P.), B., 213.

Wilder, T. S., tetany of fasting in experimental rickets, A., 345. Wilderman, M., operation and construction of filter presses, (P.), B., 459.

[unspillable vent for] electric batteries, (P.), B., 946. Wildish, H. W., treatment of oil-fuel refuse as obtained after cleaning and washing out of tanks or bunkers, (P.), B., 198. Wildman, H. A., chloride metabolism and alkalosis in alkali

treatment of peptic ulcer, A., 842.

Wildt, R., absorption bands in spectra of fixed stars, A., 740. Wilenchik, I. W., separation of copper from nickel, (P.), B., 399. Wilenski, B. A., ultrafiltration for removal of protein in the determination of amino- and residual nitrogen in blood, A.,

Wiley, C. C., effect of temperature on the strength of concrete, B., 284.

Wiley, R. C., apparatus for the determination of carbon dioxide, A.; 285.

Wiley, S. W., laboratory mill, (P.), B., 580.

Wilheim, R., dissolution of albumin coagula by neutral salts, A., 1007

Wilheim, K. F., removal or elimination of fatty acids, resins, and bitter and mucous substances from oils and fats, (P.), B., 179. extraction of fatty acids, resins, bitter substances, and mucilage from oils and fats. (P.), B., 947.

Wilhelmi, A. [with Gericke, H. K., and Gericke, S.], significance [to crop yields] of the solubility in ammonium citrate of Rhenania phosphate and basic slag, B., 757.

Wilhelmj, C.M., Bollman, J.L., and Mann, F.C., physiology of XVII. Specific dynamic action after removal of the liver. liver, A., 346.

Wilhemj, C. M. See also Boothby, W. M. Wilke, K. See Grasselli Dyestuff Corporation, and Kränzlein, G. Wilke-Dörfurt, E., and Schliephake, O., new antipyrine co-ordination compounds of metal perchlorates, A., 1250.

Wilkins, F, J, oxidation of copper at high temperatures, A., 1019. Wilkins, F, J, and Ward, A, F, H, Frenkel adsorption isotherm, A., 1232.

temperature coefficient of the saturation maximum in gaseous adsorption, A., 1376.

Wilkins,  $\hat{H}$ . See Sugden, S.

Wilkinson, G. H., and Muir, J., manufacture of [non-curling] adhesive paper, (P.), B., 469.

Wilkinson,  $\bar{H}$ ., and Tyler,  $\bar{A}$ . G., absorption of acids by wool. II.,

Wilkinson, J. A. See Borgeson, R. W., and Meints, R. E. Wilkinson, S. W., and Brown, R. B., treatment [with ozone] of wool and other animal fibres or textiles containing them, (P.), B., 848.

Willaman, J. J. See Appleman, C. O., and Traub, H. P.

Willard, C. G., and Mine & Smelter Supply Co., mill, (P.), B., 78. Willard, H. H., and Boldyreff, A. W., simple reference electrode for potentiometric titrations, A., 413.
Willard, H. H., and Schneidewind, R., determination of sulphate

in chromic acid and in chromium-plating baths, B., 895.

Willard, H. H., and Young, P., ceric sulphate as a volumetric oxidising agent. VIII. Determination of chromium in presence of manganese, iron, and vanadium. IX. Preparation and stability of solutions, A., 287.
Willard, M. L. See Orndorff, W. R.

Willard Storage Battery Co. See Lundeen, E. P., and Reinhardt. W. L.

Willcox, F. H., Hayes, J. C., jun., and Freyn Engineering Co., heat interchanger, (P.), B., 457.

Willey, J. S. See Jones, H. T.
Wille, H. V., welding of cast iron and filler rod therefor, (P.), B., 523.

Willemart, A., isomerisation of acetylenic carbinols to ethylenic ketones, A., 675.

absorption spectra of rubrenes, A., 690. preparation of p-tolylacetylene, A., 1287.

Willems, J. See Pfeiffer, P. Willetts, E. W. See Titus, P.

Willey, E. J. B., active nitrogen. VI. Formation of iron nitride in the iron-nitrogen arc, A., 39.

active nitrogen. V. Decay of the nitrogen after-glow, A., 403. nitrogen after-glow, A., 1117.

Willhite, F. M. See Bray, R. H.
Williams, A. O. See Mathey, E. Du B.
Williams, A. T., "ultimate rays" of mercury and aluminium, A., 2.

chemical valency and multiplicity of spectra, A., 3. chemical valency and spectral multiplicity, A., 243. structure of induction spectra of rare gases, A., 364.

structure of the molecules of N<sub>2</sub>, O<sub>2</sub>, and F<sub>2</sub>, A., 982. number of excited atoms and the absorption spectrum of nickel

vapour, A., 1118.
Williams, A. T., and Charola, F., series of the arc spectrum of tin, A., 366.

Williams, A. T. See also Loyarte, R. G. Williams, B. H. See Blackie, A. Williams, C. O., South African tanning materials; black wattle, B., 405.

fixation of phosphates in soils, B., 992.

Williams, D., [mill] furnaces [for steel bars], (P.), B., 23.

Williams, D., Grossmann, M. A., and Midwest Metallurgical Corporation, manufacture of rimming steel, (P.), B., 922.

Williams, D. M., photobromination of coumarin, A., 895. Williams, E. J., number of recoil electrons and intensity of modi-

fied scattering, A., 232. average "forward" momentum of photoelectrons, A., 483.

straggling of  $\beta$ -particles, A., 1358. Williams, E. J., Nuttall, J. M., and Barlow, H. S., spatial distribution of photoelectrons produced by X-rays, A., 115.

Williams, E.J. See also Nuttall, J.M. Williams, (Miss) E.T.R. See Payne, (Miss) C.H. Williams, F.J., and Westendick, F.C., relation between the temperature curve and the expansion curve in the setting of plaster, B., 520.

Williams, G., catalytic activity of molten tin; relative efficiencies of tin and its oxides as catalysts for the reduction of nitrobenzene vapour, A., 1021.

Williams, H. M., heat-resisting alloy, (P.), B., 60.
Williams, H. M., and General Motors Research Corporation, production of high heat-resisting substances, (P.), B., 684.

Williams, H. R. See Gardner, H. W. Williams, J. F., Roberts, C. J., and Jackson, Lucien C., test reagents for determining alcohol and colour [added caramel] in alcoholic liquids, (P.), B., 534.
Williams, J. F. See also Cowper, A. D.

Williams, J. W., dipole moments of some methane and ethane derivatives, A., 121.

relation between polarisation and association, A., 244. activity coefficients of ions in very dilute methyl alcohol

solutions, A., 649. Williams, J. W., and Hollaender, A., Raman effect in acctone, A., 866.

Williams, J. W. See Falkenhagen, H., Frumkin, A., Hollaender, A., and Weissberger, A.

Williams, N. H., and Huxford, W. S., determination of the charge of positive thermions from measurements of shot effect, A., 736. Williams, O. B., and Morrow, M. B., bacterial destruction of acetylmethylcarbinol, A., 101. Williams, Rice. See Robinson, G. W.

Williams, Roger, and Electro Metallurgical Co., production of

alloy-surface castings, (P.), B., 900.

Williams, Robert C., laboratory method for measuring relative adhesive qualities of fungicidal dusts, B., 616.

Williams, Robert C., and Young, H. C., toxicity of sulphur, B., 431. Williams, Robert C. See also Holmes, H. N. Williams, Roger C. See Wing, F. K.

Williams, R. J., McAlister, E. D., and Rochm, R. R., determination of micro-organisms in suspension, A., 1200.

Williams, R. J., Warner, M. E., and Roehm, R. R., effect of various preparations on growth of baker's and brewer's yeasts, A., 1339.

Williams, R. R., Waterman, R. E., and Gurin, S., effect of  $p_{\rm H}$  on thermolability of vitamin-B of yeast, A., 1203. Williams, S. V. See Smithells, C. J. Williams, T. C., and Evans, E. J., electrical conductivities of

dilute liquid amalgams of gold and copper at various temper-

williams, W. A., electrodeposition of rubber or homologous substances, (P.), B., 29.

Williams, W. M., Claytor, R. S., Fry, (Sir) J. P., and Harper, A. R., production of activated carbon, (P.), B., 457.

Williamson, B. F., and Beisler, W. H., manufacture of varnish, (P.), B., 404.

Williamson, B. F., and Stone Homes Process, Inc., building material, (P.), B., 684.

Williamson, J., new type of tunnel kiln for firing pottery, B., 172. Williamson, K. B., mosquito breeding [in water] and malaria in relation to the nitrogen cycle, B., 304.

Williamson, R. C., photo-electric long-wave limit of potassium vapour, A., 4.

emergent energy of photo-electrons in potassium vapour, A., 4. Willigen, P. C. van der. See Kruyt, H. R.

Willingshofer, K. See Heller, K. Willis, G. H. See Bennett, G. M.

Willis, L. G., response of oats and soya beans to manganese on some Costal Plain soils, B., 408.
Willis, S. L., Woodford, W. H., and Remington Arms Co., Inc.,

waterproofing [of cartridges], (P.), B., 700.
Willistord, L. H. See Briggs, T. R.
Willoughby, C. E. See Musher, S.
Willrath, H. H. See Gehrke, M.

Willshaw, H. See Dunlop Rubber Co., Ltd. Willstaedt, H. See Riesenfeld, E. H.

Willstätter, R., and Bamann, E., proteases of gastric mucosa, A., 354.

Willstätter, R., and Grassmann, W., liberation of invertase from

yeast, A., 352.

Willstätter, R., Kraut, H., and Lobinger, K., hydrates and hydrogels. XI. Simplest silicie acids; aluminium hydroxide, A., 38.

hydrates and hydrogels. XII. Mono- and di-silicic acids. A., 1251.

Willstätter, R., Kuhn, R., and Bamann, E., asymmetric hydrolysis of esters by enzymes. II. Configuration specificity of liver esterase of different animals and its dependence on concentration of the substrate, A., 957.

Willstätter, R., and Pollinger, A., peroxidase. VII. Soluble and insoluble peroxidase. IX. Peroxidase from grain, A., 1106. Willstätter, R., Pollinger, A., and Weber, H., peroxidase. VIII. Formation of peroxidase, A., 1106.

Willstätter, R., and Sobotka, H., yeast preparation and its manufacture, (P.), B., 697.

Willstätter, R., and Zechmeister, L., hydrofysis of cellulose. II., A., 544.

Willstätter, R. See also Kestner, O., and Robinson, R.

Wilner, T. See Palmaer, W. Wilputte, L., coke ovens, (P.), B., 464. Wilputte, L., and Pavitt, W. H., coke ovens, (P.), B., 422.

Wilputte Coke Oven Corporation. See Pavitt, W. H. Wilson, A. H., perturbation theory in quantum mechanics. I. and II., A., 363, 738.

Wilson, B. D., exchangeable cations in soils as determined by means of normal ammonium chlorido and electrodialysis, B.,

Wilson, B. D. See also Lyon, T. L.

Wilson, C.W. See Bichowsky, F.R.

Wilson, D. L. See Courtaulds, Ltd.

Wilson, E., corons on aluminium conductors as affected by corrosion due to atmospheric exposure, B., 901.

Wilson, E. See also Herroun, E. F

Wilson, E. B., jun. See Smythe, C. P.

Wilson, E. D., absorption spectrum of carbon disulphide in the near ultra-violet, A., 1214.

Wilson, E. D. See also Zworykin, V.

Wilson, E. O.See Tsai, L. S.

Wilson, G. F. See Anode Rubber Co., Ltd. Wilson, G. L. See Lowry, T. M.

Wilson, H. A., theory of cracking petroleum, B., 503. Wilson, H. E. C. See Boothby, W. M.

Wilson, J. A., properties of shoe leather. VII. Temper and break, B., 406.

Wilson, J. R. See Levine, S. Z.

Wilson, J. S. See Todd, W. M.

Wilson, L. C., sinker test in malt analysis, B., 792.

Wilson, M. See Dallas, J. C. Wilson, M. M., and Worster, F. J., synthetic amyl products as lacquer solvents, B., 785.

Wilson, O. G., jun., vapour-pressure chart for paraffin hydrocarbons, B., 86.

Wilson, R. See Jones, D. B. Wilson, R. E., fifteen years of the Burton process [for cracking heavy petroleum oils], B., 7.

Wilson, R. E., Hunneman, R. D., Bahlke, W. H., Rogers, F. M., and Standard Oil Co., fractionating column, (P.), B., 702.

Wilson, R. E., and Standard Oil Co., automobile motor cooling oil, (P.), B., 386.

separating wax from mineral oils, (P.), B., 770.

pressure distillation of heavy hydrocarbon oils, (P.), B., 883. distillation of hydrocarbon oils, (P.), B., 1041.

Wilson, T. A., lattice constants and the space-groups of barium and strontium carbonates, A., 1222.

crystal structure of strontium oxide, A., 1368.

Wilton, N. See Chem. Engineering & Wilton's Patent Furnace Co., Ltd., and Wilton, T. O.

Wilton, T. O., and Chemical Engineering & Wilton's Patent Furnace Co., Ltd., distillation of tar, (P.), B., 385.

furnaces and furnace grates, (P.), B., 739.

Wilton, T. O., Wilton, N., and Chemical Engineering & Wilton's Patent Furnace Co., Ltd., plant for washing, drying, and chemical treatment of granular and crystalline materials, (P.), B., 192.

Wilton, T. O. See also Chem. Engineering & Wilton's Patent Furnace Co., Ltd.

Wiltshire, J. L. See Barnett, E. de B.
Wimmer, A. See Schulz, E. H.
Wimmer, J. See Mugdan, M.
Winans, J. G., energies of dissociation of cadmium and zinc molecules, A., 236.

energies of dissociation of cadmium and zine molecules from an interpretation of their band spectra, A., 481.

flutings in the absorption spectrum of a mixture of mercury and cadmium vapours, A., 481.

Winans, J. G., and Stueckelberg, E. C. G., origin of the continuous spectrum of the hydrogen molecule, A., 118.

Winby, L. P., distillation retorts, gas generators, etc., (P.), B., 587. Winchester Repeating Arms Co. See Jordan, L. W., and McNutt, J. D.

Winckler, H. See Diels, O.

Windaus, A., glucosides of digitalis leaves, A., 106. formulæ of Digitalis glucosides. II., A., 299.

Windaus, A., and Auhagen, E., transformations of ergosterol, A.,

Windaus, A., Bergrann, W., and Lüttringhaus, A., transformations of ergosterol perexide, A., 1065.
 Windaus, A., and Haack, E., formula of digitalinum verum, A.,

543.

Windaus, A., and Stein, G., formula of digitoxin, A., 71.

Windgassen, W., production of gum from locust beans, (P.),

Windhausen, O., [lack of] injurious effects to health of the methyl alcohol formed in alcoholic fermentations, A., 1105.

Windisch, F., aërobic and anaërobic metabolism of cultivated yeasts, A., 101.

fermentation in open and closed vessels, B., 69.

Windisch, F., influence of temperature and duration of storage on the fermentative power, cell increase, and acid production of top-fermentation yeasts, B., 224.

maintenance and regeneration of warm-stored bottom- and top-fermentation yeasts, B., 298.

apparatus for determining water content of barley and malt, В., 373.

biological condition of "bottich"-sediment yeast; usefulness of pumping-off wort from the "bottich," B., 618.

preparation of an active dried pitching-yeast, B., 734. sediment yeast and pumping off in the fermenting cellar, B.,

792.

influence of turbidity of the pitching-wort on the primary [bottom-]fermentation of beer, B., 833. turbidity and turbidity flavour [in brewing], B., 833.

preservation of yeast by pressure, freezing, or storage under water, B., 907.

course of fermentation in the fermenting vessel; [condition of yeast during primary fermentation], B., 952.

Windisch, W., and Kolbach, P. [with Baumann, K.], formation of ammonia during brewing processes, B., 224.

Windisch, W., Kolbach, P., and Banholzer, W., influence of arti-

ficial acidification of mash or wort on the composition of the resulting worts and beers, B., 69.

Windisch, W., Kolbach, P., and Benedek, L. von, influence of temperature on the pH optimum of diastase during mashing, B., 907.

Windisch, W., Kolbach, P., and Schild, E., determination of the

volatile acids in beer, B., 760. Windisch, W., Kolbach, P., and Vogl, C., coagulation of proteins

during boiling of unhopped wort, B., 953.
Windisch, W., Kolbach, P., and Winter, M., analysis of the bitter substances of hops, B., 412.

Wing, F. K., and Williams, Roger C., chlorination relieves ponding on sewage filter beds, B., 455.
Winger, R. E., and Yost, D. M., valency of sulphur in dithionates

A., 983.

Wingert, W. B. See Barrett Co.

Wingler, A., and Winthrop Chemical Co., Inc., production of esters of di-iodobehenolic acid, (P.), B., 538.

Wingler, A. See also I. G. Farbenind. A.-G., and Schulemann, W. Winkelmann, II., use of the Parr calorimeter for determining the calorific value of solid fuels, B., 504.

Winkelmann, H. A., and Busenburg, E. B., effect of stearic acid on reclaimed rubber, B., 827.

Winkelmann, H. A., and Goodrich Co., B. F., rubber composition and its manufacture, (P.), B., 692.

Winkelmann, H. A. See also Geer, W. C. Winkle, R. van, and Christiansen, W. G., cause of irritation of 8-hydroxyquinoline compounds; effect of  $p_{\rm H}$  caused by acid molecule, B., 869.

Winkle, R. van. See also Briod, A. E. Winkler, F., and Köck, F., preparation of diastase, A., 956. Winkler, G., and Zierer, A., preparation of mild aromatic yoghurtcurdled milk or sweet yoghurt junket, (P.), B., 492\*.

Winkler, H. J. V., continuous distillation of tar or crude mineral oil by superheated steam, B., 422.

Winkler, J. See Burstin, H., Galicyjskie Towarzystwo Naftowe "Galicja" S.A., Pilat, S., and Piotrowski, W. J.

Winkler, W. See Scholl, R. Winks, F. See English, S., and Hodkin, F. W.

Winnacker, K. See Berl, E.

Winogradsky. See Vinogradski. Winokuti, K. See Nishizawa, K.

Winship, W., apparatus for heat-treatment of fluids, (P.), B., 579. Winter, D.A. See Bone, W.A.Winter, J.E. See Barbour, H.G., and Taylor, W.F.

Winter, M. See Windisch, W.

Winter, O. B., and Bird, O. D., determination of aluminium in plants, II., A., 1497.

Winter, O. B., Thrun, W. E., and Bird, O. D., determination of aluminium in plants. I. Use of aurintricarboxylic acid for the colorimetric determination of aluminium, A., 1413.

Winter, R. M., and Imperial Chemical Industries, Ltd., production of carbon and hydrogen chloride, (P.), B., 803.

Winter, V. V., separation of constituents of frozen milk after fractional fusion, B., 108.

separation of the components of frozen milk by fractional melting, B., 535\*.

Winterfeld, K. [with Holschneider, F. W.], sparteine, A., 1186.

Winterfeld, K., and Siecke, H., determination of free iodine and potassium iodide in tincture of iodine (D.A.B. VI.), B., 301. Winterholder, L. See Scheuing, G. Winternitz, R. See Stary, Z. Winters, E., jun., and Smith, R. S., determination of total carbon in soils, B., 1048. Winters, R. W., and Yntema, L. F., preparation of beryllium chloride from beryl, B., 641.
Wintersteel, W. See Bürger, M. Winterstein, A., and Arosnon, E., tobacco smoking. II., A., Winterstein, A. See also Kuhn, R. Wintersteiner, O. See Jensen, H. Wintgen, R., and Engelmann, H., precipitation of gelatin by inorganic colloids, A., 263. Wintgen, R., and Kühn, O., constitution of micelles. IV. Colloidal oxides of iron and aluminium, A., 26. Winther, C., exidation of hydrogen iodide in the dark and in the light. III. Constitution of iodine solution. IV. Discussion of the light-sensitiveness, A., 893. Winthrop Chemical Co., Inc. See Benda, L., Bockmühl, M., Callsen, J., Eisteb, O., Griessbaeh, R., Günzler, H., Hahl, H., Knorr, A., Kropp, W., Meisenburg, K., Schmidt, Hans, Schulemann, W., Weyland, H., and Wingler, A. Winton, F. R., thermostat constant to 0.001°, A., 1034. Winton, F. R. See also Kerridge, P. T. Winzer, C. B., continuous ovens or kilns, (P.), B., 919. Winzer, C. B. See also Continuous Coal Carbonisation, Ltd. Winzer, K. See Sonn, A. Winzer, R. See Lorenz, R., and Thilenius, R. Wirth, F., use of carbon tetrachloride in fire extinguishers, B., 799. Wirz, E., and Aktien-Gesellschaft Brown, Boveri & Co., heatingfurnace apparatus, (P.), B., 837.
Wise, E. C., and Heyl, F. W., [influence of administration of mixtures of ammonium chloride and hexamethylenetetramine on the urine, A., 1196. Wise, E. C. See also Heyl, F. W., Speer, J. H., and Westcott, L, E,Wisniewski, F. J. von, structure of the atom, A., 7. Wistinghausen, L. V., accelerator consumption during vulcanisation, B., 484. Wit, H., physical decolorisation of bile, A., 715. Withrow, J. R. See Brown, W. F., and Reed, R. D.
Withycombe, R. M., application of [rubber, etc.] coatings to
motal surfaces, (P.), B., 440. Witkowitzer Bergbau- & Eisenhütten-Gewerkschaft, and Salat, C., coal-dust, gas, and oil burner for constant velocities of ojection under variable loads, (P.), B., 844. Witmer, E. E., relative masses of the proton, electron, and helium nucleus, A., 973. Witmer, E. E. See also Wigner, E. Witsch, K. See Junkersdorf, P. Witt, J. C. See Miller, L. B. Wittand, W. See Centnerszwer, M. Witte, A. See Kaliwerke Aschersleben. Wittek, H., reduction of zinc ores, (P.), B., 901\*. Witteveen, H. J., the washing out of chloride [added to soils], B., 184. Wittig, G., Kleiner, H., and Conrad, J., o-benzidine rearrangement of 4-phenylhydrazino-5-phenyl-3-methylisooxazole, A., 456. Wittig, G., and Leo, M., ring strain and radical formation. III., A., 921. Wittouck, S., manufacture of barium compounds [silicates], (P.), B., 643. Wittrisch, H. See Treff, W. Wlceck, E. See Penin, P., Gummi-Waaren-Fabr. A.-G. Włostowska, W., polygalacturonic acid, A., 1042. Wodars, F. See Stoermer, R. Wöhlbier, W., storage of protein by sucking pigs, A., 213. Wöhlk, A., indirect detection and determination of alkali sulphates in certain other metallic sulphates, A., 163. preparation of liquor aluminii acetici, B., 111. fitration of mercurial preparations used in pharmacy, B., 957. Wöllmer, W., analysis of hops, B., 413. Woernle, B. See Kulenkampff, H.

Woetzel, K. See I. G. Farbenind. A.-G. Wohinz, R. See Schilf, E.

Wohl,  $K_{\cdot \cdot}$ , gaseous state of low-boiling substances,  $\Lambda_{\cdot \cdot}$ , 251.

Wohl, K., and Elbe, G. von, method of reducing heat losses during gaseous explosions and its use in a new method of determining the specific heat of water vapour, A., 1372. influence of water vapour on the heat radiation of exploding gas mixtures; specific heat of water vapour at high temperatures, A., 1394.

Wohl, V. H., production of oxide incandescence cathodes, (P.), B., 527. Wohlenberg, W. See Meyer-Bisch, R. Wohlgemuth, J. [with Klopstock and Hayashi], influence of hormones on cell chemistry, A., 101. Wohnlich, E. See Gronover, A. Woidieh, K., micro-determination of nitrates and nitrites, A., 1411. Woinar, A. O., effect of secretin in the regulation of the alkali reserve of the blood. I. Experimental alkalosis, A., 1111. Woitinek, H. See Ruff, O. Wokes, F., variation in activity of different samples of strophanthin, B., 452. stability of extracts of ergot, B., 1031.
Wolcott, E. R., and Texas Co., manufacture of hydrochloric acid, (P.), B., 244. Wold, P. I., Hall effect in single metal crystal, A., 1133. Woldman, N. E., ammonium acetylsalicylate; "ammonaspirin," B., 263. Wolesensky, E., decomposition of barium sulphate by solutions of sodium carbonate, A., 415. determination of sulphur in rubber by the perchloric acid method, B., 29. Wolf, A. See Euler, H. von. Wolf, E. F., effect on concrete of acid water from stored bituminous coal, B., 1003. Wolf, F., polarisability of an electron pencil, A., 232. Wolf, G. See Granacher, C. Wolf, H., formation of lactic acid from sucrose under pressure, A., 1272. Wolf, H., and Heilingötter, R., volumetric determination of tin, A., 1160. Wolf, H. See also Bernhauer, K. Wolf, Herbert. See Funke, K. Wolf, Hermann, and Carburol A.-G., continuous distillation of hydrocarbons with simultaneous cracking of high-boiling into low-boiling hydrocarbons, (P.), B., 885\*. Wolf, I. See Schlubach, H. H. Wolf, K., voltol, B., 232 Wolf, Karl. See Mark, H. Wolf, K. L., dipole moments, association, and ultra-violet absorption of aliphatic ketones and their solutions. I. Influence of solvent and mechanism of reaction from the point of view of the dipole theory, A., 244. organic dipole-molecules with singly- and doubly-linked oxygen, A., 742.
Wolf, K. L., and Herold, W., ultra-violet absorption of the Wolf, K. L., and Lederle, E., dipole moments of some aliphatic ketones, A., 243. Wolf, K. L., and Volkmann, H., expression for natural rotation [of light] corresponding with that for molecular refraction, À., 743. Wolf, Lothar, excitation of frictional electricity, A., 250. Wolf, Ludwig, Kalaehne, E., and Schmager, H., phosphorous oxide. II. Reciprocal action between phosphorus trichloride and phosphorus acid, A., 897. Wolf, Ludwig, and Schmager, H., phosphorous oxide, A., 662. Wolf, M., crystal structure of solid mercury, A., 382. Wolf, M. See also Coster, D. Wolf, P., coal-washing apparatus, (P.), B., 274. Wolf, R. B., acid-sulphite pulp process, (P.), B., 320.
Wolf Akt.-Ges., R., removal in layers of material from vacuum filters, especially from drum filters, (P.), P. 3. Wolfe, R. A. See Duffendack, O. S. Wolff, A., inoculation of pasteurised milk, B., 70, 225. inoculation of pasteurised milk [with lactic acid bacteria], B., Wolff, André, printing sulphur dyes without attacking the printing rollers, B., 715. discharges [using resorcinol] on cellulose acetate silk, B., 751. [production of] crêpe effects on delaines, B., 751. Wolff, E., [oxide electrode for] galvanic batteries, (P.), B., 527. doors of horizontal ovens for producing gas, coke, etc., (P.), B., 670.

Wolff, Ernest. See Eberson, F. Wolff, F. See Henri, V. Wolff, Hans, drying process of fatty oils, B., 102. distribution of pigment in paint films, B., 103. oil absorption and viscosity of paints, B., 825. drying of tung oil, B., 947. viscosity of oil paints, B., 947. testing and evaluation of the durability of paints, B., 988. Wolff, Hans, and Rosen, B., influence of plasticisers on viscosity and susceptibility to light of nitrocellulose lacquers, B., 786. Wolff, Hans, and Toeldte, W., method of observing the drying times [of varnish] films, B., 255. drying of linseed oil and boiled oils, B., 564. drying of oil paints and varnishes, B., 690. comparative investigation on oil- and nitrocellulose varnishes, B., 1046. Wolff, Hans, Toeldte, W., and Zeidler, G., paint testing, B., determination of oil absorption of pigments, B., 483. Wolff, Hans, and Wilborn, F., determination of scratch hardness [of paint and varnish films] by means of load poncils, B., 825. Wolff, Hans, and Zeidler, G., the red lead question, B., 333. white pigments. III., V., 948. Wolff, Hans. See also General Electric Co. Wolff, Hugo. See Lüttringhaus, A. Wolff, H. T., theory of photo-electric action, A., 229. Wolff, L. K. See Laqueur E.
Wolff, O., starch factory control. II. Determination of removable starch in pulp. III. Determination of fixed starch in pulp, B., 733. determination of the solubility of white dextrins and soluble starches, B., 791. Wolff, P. See Lorenz, R. Wolff, W. A. See Balls, A. K. Wolff & Co. Kommandit-Ges. auf Aktien, and Weingand, R., production of cellulose, (P.), B., 50. drying of films, bands, etc., of cellulose, etc., (P.), B., 1011. Wolffenstein, R., preparation of derivatives of quinoline [atophan], (P.), B., 835. Wolffenstein, R. See also I. G. Farbenind. A.-G. Wolfke, M., degree of association in liquid dielectrics, A., 13. Wolfke, M., and Keesom, W. H., dependence of dielectric constant of liquid helium on temperature, A., 242. Wolfram, A. See Grasselli Dyestuff Corporation. Wolfrom, M. L., acetate of free aldehydic form of dextrose, A., 1043. Wolfson, E., apparatus for reduction of nickel catalyst, B., 522. Wolinski, K., coal-dressing apparatus, (P.), B., 47. diaphragms for electrolytic cells, (P.), B., 783. Wolk, L. J. van der. Seo Lanzing, (Miss) J. C. Wollak, R., iodometric determination of a mixture of sulphide, wollan, E. O., are characteristic X-rays polarised? A., 123.
Wollan, E. R., producer furnaces for boiler heating and like purposes, (P.), B., 457. gas producer and boiler plant for liquid-heating and steam-raising purposes, (P.), B., 837. gas producers, (P.), B., 932.
Wollenweber, H. W. See Houben, J.
Wolman, K. H., wood-preserving means, (P.), B., 397\*. Wolski, P. See I. G. Farbenind. A.-G. Wolters, G. O., regenerative coke oven, (P.), B., 44. Woltjer, H. R., and Wiersma, E. C., anomalous magnetic properties at low temperatures: anhydrous ferrous chloride, A., 1134. Wolton, H. W. See Macintosh & Co., Ltd., C. Wolvekamp, H. P. See Vonk, H. J. Wood, A. A. See Gerstley, J. R.
Wood, A. R., and eathwood, M. N., glasses transparent to ultraviolet radiation, B., 897. Wood, C. Sco Castle, G. C. Wood, C. B., succinchloroimide for the treatment of small quantities of potable water, B., 76. Wood, C. D. See Grasselli Chem. Co. Wood, C. E. Seo Joseph, T. L.

Wood, E. See Bindphast Products, Ltd. Wood, F. C., cellulose methylene ether, A., 1427.

Wood, H. See Burkhardt, G. N.

photosynthesis, A., 1112.

Wood, J:K. See Burns, H.M. Wood, (Miss) L. See Lorah, J. R. Wood, N. D. See Silk, K. Wood, R. G. See Brindley, G. W., and James, R. W. Wood, R. T., and American Magnesium Corporation, magnesium primary cell, (P.), B., 252. Wood, R. W., Raman effect with hydrogen chloride; the "missing line," A., 241. Raman lines under high dispersion, A., 241. Raman lines from gaseous hydrogen chloride, A., 378. chromium echelette gratings on optical flats for infra-red investigations, A., 623. Raman effect in gases. I. Hydrogen chloride and ammonia, A., 627. Raman effect by helium excitation, A., 741. spectra of high-frequency discharge in oxygen and carbon monoxide, A., 1350. densitometer curves for the green mercury line, A., 1352. Wood, R. W. See also Gaviola, E. Wood, W. L. See Dack, G. M., and Wheeler, R. V. Wood, W. R., pulverising apparatus, (P.), B., 496. Wood, W. R., and International Combustion Engineering Corporation, apparatus for pulverising, (P.), B., 193\*. Wood Conversion Co. See Schorger, A. W., and Weiss, H. F. Woodall-Duckham (1920), Ltd., and Duckham, (Sir) A. McD. apparatus for pneumatic separation or grading of solid materials, (P.), B., 268. apparatus for pneumatic separation or grading of solid materials [by air blast], (P.), B., 344. repairing heated structures such as furnaces, retorts, etc., (P.), B., 664. intermittently operating carbonising chambers, (P.), B., 705. [cement gun for] repair of concrete or like structures, furnace linings, etc., (P.), B., 817. Woodall-Duckham (1920), Ltd., and Hornby, F. A., apparatus for charging furnaces for burning refuse or like material, (P.), B., 266. apparatus for charging furnaces, refuse destructors, producers, etc., (P.), B., 762 Woodall-Duckham (1920), Ltd., and McEwan, M. H., regenerative furnaces, (P.), B., 663. Woodall-Duckham (1920), Ltd., and Scott, A., refuse destructor installations, (P.), B., 998. Woodall-Duckham (1920), Ltd., and Symington, S., screening of materials, (P.), B., 740. Woodall-Duckham (1920), Ltd. See also Krall, R. F., and Reber, J. W. Woodbridge, R. G. See Du Pont de Nemours & Co., E. I. Woodcock, W. G. See Beckett, E. G. Woodford, W. H. See Willis, S. L. Woodhead, R., and Simons, V. D., cooking wood chips by the alkaline process of pulp manufacture, (P.), B., 50. Woodhull, S. T., and Amrad Corporation, electrolytic cell, (P.), B., 135. Woodlands, Ltd. See Chitty, C. W. Woodley, J. W. A. See Butcher, R. W. Woodman, H. E., Norman, D. B., and Bee, J. W., nutritive value of pasture. IV. Influence of intensity of grazing on yield, composition, and nutritive value of pasture herbage. II., B., Woodman, R. M., dual emulsions with examples of interest in the spraying of trees, A., 262. Woodman, R. M., and Gallagher, P. H., attempted measurement of the partition coefficient of a colloid, gelatin, between two liquids, A., 998. Woodman, R. M., and Taylor, E. McKenzie, character, properties, and possible uses of bentonite, a sodium clay, B., 730. Woodridge, J. L. See Kershaw, W. E. Woodroffe, D., determination of fat in leather, B., 257. Woodrow, J. W. See Bailey, A. C. Woodruff, J. C., Bloomfield, G., Bannister, W. J., and Commercial Solvents Corporation, catalyst for synthetic production of methyl alcohol, (P.), B., 123\*.

Woodruff, J. C. See also Commercial Solvents Corporation. Woods, D. E., Neel, E. J., and Oil-O-Treat Co., treatment of crude petroleum oil, (P.), B., 885. Woodson, J. C., and Westinghouse Electric & Manufacturing Co., electric [arc] furnace, (P.), B., 61. Wood, J. G., relation between water content and amount of electric furnaces, (P.), B., 135, 216, 400. Woodstock, IV. See Meloche, V. W.

Woodward, G. E., silica gel for the extraction of high-sulphur oils from crude petroleum, B., 704. volumetrie determination of sulphur in crude petroleum, B., Woodward, H. E. See Du Pont de Nemours & Co., E. I. Wooleock, J. See Lorenz, R. Wooldridge, H. B., and Clark, P. G., decolerisation and purification of saccharine materials, (P.), B., 791. Wooldridge, W. R. Sco Quastel, J. H.

Woolf, B., enzymes in B. coli communis which act on fumaric acid, A., 850.

Woolf, J. A. Sce Leaver, E. S.

Woollatt, G. S. See Gen. Electric Co., Ltd. Wooller, A. See Harding Chem. Co., Ltd. Woollett, P. W. See Richardson, J. W.

Wooster, C. B., dissociation and the colour of free radicals, A., 648.

structure of metal ketyls. I. The Schmidlin formula, A., 928. Wooster, C. B. See also Harris, L. Wooster, W. A., piezo-electric effect of diamond, A., 633.

two-circle X-ray spectrometer, A., 902.

Wooten, L. A. See Clarke, B. L.
Worboys, W. J., and Imperial Chemical Industries, Ltd., production of granular fertilisers, (P.), B., 410.

Work, L. T., crushing and pulverisation, B., 541. Worley, S. L. See Pierre, W. H.

Wormall, A. Sce Gordon, J.

Worms, J. P. Sco Escaich, A. Worrall, D. E., [preparation of]  $\omega$ -nitrostyrene, A., 1052. Worrall, Ltd., J. & J. M. See Livsey, H.

Worsnop, B. L., diffraction of electrons at ruled gratings, A., 369. Worster, F. J. See Wilson, M. M.

Worswick, B. See Bradley, H.

Worthington, L. S., and Thompson, C. L., apparatus for combining natural gas and hydrocarbon oil for the production of gasoline, (P.), B., 385.

combining natural gas and hydrocarbon oil for production of gasoline, (P.), B., 466.

Wosbutskaja. See Tiulin, A. T. Wowern, J. von. See Klarmann, E.

Wozasek, O. See Popper, H. Wozasek, O. J. See Guthrie, R. G.

Wrangell, M. von, velocity of absorption of iens by plants, A., 476. Wratschko, F., volume chemistry. IV. Mixed oxygen compounds. I. Carboxyl group, A., 23. application of "critical solution temperature" to pharma-

ceutical investigations, B., 957.

Wrede, F., and Hettche, O., prodigiosin, the red dye of B. prodigiosus. I., A., 1469.
Wrede, F., and Strack, E., pyocyanine, the blue colouring matter of Bacillus pyocyaneus. IV. Constitution and synthesis of pyocyanine, A., 580.

synthesis of pyocyanine and certain homologues, A., 1314. Wrede, F., Strack, E., and Bornhofen, E., choline in the placenta and its relation to labour, A., 1191.

Wrede, H., liquefaction and decomposition of starch by biolase

and its use in the paper industry, B., 450.

Wren, H., and Wright, E., phenylsuccinic acid series. IX. Resolution of r-diphenylsuccin-a and -\beta-naphthylamic acids into their optical antipodes. X. Racemisation phenomena observed during the action of water and bases on optically active diphenylsuccinic anhydrides, A., 314.

Wright, A., trend of filtration, B., 542. Wright, A. See also Henry, V. S.

Wright, C. A., manufacture of a new medicine [from iris flowers], (P.), B., 73.

Wright, C. J., methods of refining sulphurous oils, B., 630. Wright, C. J., and Combustion Utilities Corporation, burning of lime, (P.), B., 646.

Wright, C. M. See Terrey, H.

Wright, D. D., new physical test for vulcanised rubber, B., 294.

Wright, E. See Wren, H.

Wright, E. P., absorption of two earthenware bodies and their resistance to crazing in the steam test, B., 246.

Wright, G. F. See Gilman, H. Wright, G. M., rotenone and degradation products, A., 190. Wright, H. D., effect of certain factors on the growth of the pneumococcus, A., 1494.

Wright, K. E. See Overman, O. R. Wright, L. M. See Cajori, F. A.

Wright, N. C., membrano equilibria and selective absorption, A., 877.

Wright, N. C., and Papish, J., inorganic constituents of milk, A., 953.

Wright, R., and McGregor, T., effect of gases on the colour of iodine vapour, and the solvent action of various vapours on solid iodine, A., 977.

Wright, R. See also Gregg-Wilson, (Miss) N. Wright, S. L., jun., Herr, E. F., and Paul, John R., relationship of lactic acid to optical activity of blood, A., 207. Wright, W. H. See Elder, L. W., jun. Wrigley Co., W., jun. See Ranney, W. B.

Wu, H., denaturation of proteins. VII. Denaturation versus coagulation, A., 459.

Wn. H., and Chen, T. T., denaturation of proteins. IX. Liberation of non-protein substances on denaturation and coagulation of proteins, A., 459. denaturation of proteins. VIII. Effect of denaturation and

coagulation on acid- and base-binding power of proteins,

determination of respiratory exchange of small animals, A., 1101. basal metabolism of omnivorous and vegetarian rats, A., 1101.

Wu, H., and Ling, S. M., colorimetric determination of serumproteins by means of phenol reagent, A., 88.

Willing, J. A. von, purification of lactic acid, (P.), B., 11.
Willing, J. A. von. See also Busch, A.
Wüllen-Scholten, W. van, paint resistant to flue gas, B., 254.
corrosion of iron in sodium chloride solution, B., 285. oil absorption of pigments, B., 948

Wünschendorff, H., and Killian, C., metabolism of Ustulina wulgaris, L., A., 724.
Würgler, J. See Soc. of Chem. Ind. in Basle,
Würstlin, K. See Hevesy, G. von.

Würtenberger, R. See Treusch, A. Württembergische Metallwarenfabr., production of electrolytic deposits of varying thickness, (P.), B., 688. Wuest, A., liquid filter, (P.), B., 155.

Wüst, F., purifying pig iron, (P.), B., 985\*. Wüst, J. See Romels, B.

Wüstenfeld, H., and Luckow, C., examination and evaluation of wine distillates and wine brandies, B., 574.

Wullt, O. R. See Bigwood, E. J. Wull, O. R. See Birge, R. T. Wulfert, K. See Lunde, G.

Wulfestieg, F. See Diepschlag, E.

Wulff, J., deposition and surface tension, A., 641.

precipitation and surface tension, A., 876.

Wulff, P., refractometric researches. VI. Interferometric method of determining the refractive index of crystals, A., 13.

Wulffsohn, A. See Dziewoński, K. Wunenburger, R. See Briner, E.

Wurm, K., band spectrum of lithium, A., 118.

Wurmser, R., and Geloso, J., derivative of dextrose concerned in the oxidation-reduction equilibrium of cells, A., 719. potential of solutions of sugars. II., A., 1393.

Wurmser, R. See also Rapkine, L.

Wurstemberger, F. von., soldering of iron and steel parts, (P.), B., 1019.

Wurz, O., decomposition of red beech and white birch by the

sulphite process, B., 847.

Wuyts, H. [with Janssens, T.], action of phenylhydrazine on aromatic dithio-acids, A., 1176.

Wyatt, W. F., solutions. II. F.-p. diagrams and latent heats of evaporation of binary mixtures of volatile liquids. III. The transition point of carbon tetrachloride and compounds of carbon tetrachloride or chloroform with acetone, ether, and benzene, A., 254.

Wyckoff, R. W. G., crystal structure of tetramethylammonium halides, A., 18.

crystal structure of tetraethylammonium iodide, A., 631. crystal structure of ethylammonium chlorostannate, A., 747.

Wyckoff, R. W. G., and Corey, R. B., crystal structure of trimethylethylammonium chlorostannate, A., 493.

crystal structure of dimethyldiethylammonium chlorostannate, A., 988.

Wylam, B., Thomas, J., and Scottish Dyes, Ltd., esterification of cellulosic materials, (P.), B., 594. Wylam, B. See also Barnes, R. S. •

Wyler, J. A., and Trojan Powder Co., ammonium nitrate explosive, (P.), B., 738.

Wyman, L. C., and Walker, B. S., suprarenal insufficiency. IV. Blood-sugar in suprarenalectomised rats, A., 954.

Wyneken, I., optical measurement of small degrees of dissociation of the vapours of metallic salts, A., 396 Wynne-Jones, W.F.K. See Brönsted, J.N., and McBaln, J.W.

Wyrobek, O. See Marchlewski, L.

Xanthopoulos, J., rearrangement of stereoisomeric hydrazones,

Yabana, K., solubility of uric acid in presence of proteic acids, A., 1500.

Yablick, M., manufacture of silica gel, (P.), B., 516. Yabuta, T., and Simose, R., preparation of maleic acid by catalytic oxidation of benzene, A., 679.

Yabuta, T., and Zaidan Hojin Rikagaku Kenkyujo, preparation of maloic and succinic acids from furfuraldehyde by electrolysis, (P.), B., 467\*.

Yager, C. B. See Coleman, G. H. Yaginuma, T. See Takahashi, G.

Yalo, H., and Kasai, H., purification of vaccine virus by adsorption on kaolin, A., 850.

Yaitschnikov, I. S., hydrolysis of gelatin by means of acid and alkali, A., 646.

Yakimetz, E. M. See Efremov, N. N.

Yakovkin, G. A., synthetic carbamide from ammonia and carbon dioxide, B., 707, 971.

Yakubchik, A. O. See Lebedev, S. V.

Yamada, Masakazu, furfuraldehyde derivatives in fermentation products, B., 373. Yamada, Minoru. See Miyagawa, I.

Yamada, R., relation between stress and strain in the impact test, B., 439.

Yamada, T. See Mizushima, S. Yamagishi, G. See Katagiri, H.

Yamaguchi, B. See Kano, Y. Yamaguchi, Keiji, internal strain of uniformly distorted alumin-

ium crystals, A., 1220. slip-bands of compressed aluminium crystals. I. Distortion by single slipping and a tentative theory of work-hardening of metal, A., 1370.

Yamaguohi, Keiji, and Togino, S., slip-bands of compressed aluminium crystals. II. Extension at high temperatures,

determination of the orientation of a crystal from a Laue photograph, A., 1366. Yamaguchi, Keiji. See also Togino, S.

Yamaguchi, Kichiro, flotation of coal, B., 193.

Yamaguchi, S. See Michaelis, L. Yamaguti, T. See Muto, T.

Yamamoto, R. See Terada, T. Yamamoto, S., and Masuda, S., chemical change in the drying by heat of fish muscle. I., A., 1191.

Yamamoto, Taro, testicles and water metabolism, A., 1495. Yamamoto, Teiichi. See Kimata, T.

Yamanaka,  $G_{\cdot}$ , antitryptic activity of sera, A., 1476.

Yamane, S., hardening of Portland cement and the liberation of

lime, B., 173.

Yamano, S. See Ogura, K.
Yamashita, M., application of the Hoesch reaction to nitrobenzonitriles, A., 929\*.
Yamashita, M. See also Ueno, S.
Yamashita, T. See Kami, Y.

Yanishevski, E. M., mineralogical composition of tripoli of

Kalugo district, U.S.S.R., A., 1418.

Yankovski, V. D. See Gagarina, E. D.

Yanovskaya, B. I. See Dogadkin, B.

Yanovski, V., instrument for determining the specific gravity of refined sugar, B., 372.

Yao, W. N. See Kröger, M.

Yard, W. S., and Percy, E. N., electrothermal gas producer, (P.), B., 385.

continuous oil-gas process, (P.), B., 632.

Yard, W. S. See also Morgen, R. A.

Yarnold, E. T. See Bowen, E. J. Yarrow, H. E., pulverised-fuel burners, (P.), B., 199, 746.

Yasuda, M., nature of salt hydrolysis of starch considered in the light of the influence of salt on the development of bacteria, A., 1281.

Yatlov, V. S. Seo Volf, F. F.

Yeandle, W. H., and Intercontinental Rubber Co., recovery of rubber, (P.), B., 182.
Yeates, R. L. See Grindley & Co., Ltd.
Yeats, J. I. See Brown, A. R.

Yeaw, J., explosive limits of industrial gases, B., 1037. Yee, M. See Tso, E. Yensen, T. D., has pure iron allotropic modifications? A., 1135. iron-silicon-carbon alloys; constitutional diagrams and magnetic properties, B., 854.

on the road to pure iron and some of its indicated properties, B., 898.

Yeomans, C. D. See Logan, K. H.

Yersin, A., solder for aluminium, (P.), B., 562.

Yngve, V., purification of salt and recovery of by-products, (P.), B., 206.

Yntema, L. F., separation of niobium and tantalum by electrolytio hydrolysis, A., 671. Yntema, L. F. See also Winters, R. W.

Yoder, J. D., equipment for the treatment of feed water for modern steam boilers, B., 962.

Yodomigawa, K., colorimetric micro-determination of chloroform, A., 836.

Yoe, J. H., and Mote, J. H., composition of sodium bismuth tartrate, A., 794. Yoe, J. H. See also Sanderson, E. Yohe, G. R. See Clark, G. L.

Yokoyama, M., electrochemical oxidation of m-xylene-4-sulphonic acid, A., 1052.

Yokoyama, T., reclamation of vulcanised rubber, (P.), B., 904. Yokoyama, Y. See Kamamura, K.

Yokoyama, Yoshikuni. See Suzuki, B. Yontz, J. E. See Weatherby, L. S.

York, H. W., and American Smelting & Refining Co., mixing apparatus [for refining lead], (P.), B., 687.

Yoshida, K., appearance of glycogen in the mucous membrane of the alimentary canal. XVI. and XVII., A., 1483.

Yoshida, T., E.M.F. of the reversible cell in a non-aqueous solution, A., 653.

Yoshida, U., and Tsuboi, S., examination of ice crystals by Xrays, A., 1220.

Yoshimaru, Y. See Izume, S. Yoshimatsu, G., behaviour of ethyl- and phenyl-sulphuric acids towards extracts of organs, A., 1490.

behaviour of aromatic esters towards extracts of organs. I .--III., A., 1490. Yoshimoto, S., Okumura, T., and Nakamura, S., shaped masses;

[slag bricks], (P.), B., 131. treatment of copper slag, (P.), B., 900\*. Yoshimura, J., radioactive constituents of hokutolites and other

Yoshimura, J., See also Simori, S.
Yoshimura, J. See also Simori, S.
Yoshimura, T., spectrophotometric study of micas, A., 1126.
Yoshioka, T., measurement of thermal expansion of pottery bodies, B., 19.
Yoshioka, T. and Hiracka, S. copper ruby glaza, J. B. 95

Yoshioka, T., and Hiraoka, S., copper ruby glaze. I., B., 95. Yoshioka, T., and Irie, T., clay slip. I. Electrolytes, fluidity, and hydrogen-ion concentration, B., 1016.

Yost, D. M. See Crowell, W. R., Tolman, R. C., and Winger, R. E.

Yost, M. See Pringsheim, P. Young, A. G., and Taylor, F. H. L., electrolytic determination of

small amounts of mercury in body fluids and tissues, A., 1500. Young, A. W., Louth, M. E., and Udylite Process Co., cadmiumplating bath, (P.), B., 61\*.
Young, C. L. See Robinson, H. R.
Young, C. O., and Carbide & Carbon Chemicals Corporation,

manufacture of ethylene glycol monoalkyl others, (P.), B., 426. Young, D. J., manufacture of motor fuels and similar products, (P.), B., 745.

Young, E. G., endocellular enzymes of B. coli communis, A., 1493. Young, F. W. See Filtration Engineers, Inc., and Henry, V. S. Young, H. C. See Macintosh & Co., Ltd., C., and Williams, Robert C.

Young, H. D., evolution of hydrocyanic acid from calcium cyanide, B., 849.

Young, H. D., and Nelson, O. A., vapour pressure of fumigants. IV. Vapour pressure of nicotine, B., 456.

Young, Hoylande D., stereoisomeric bromoketimines, A., 69. Young, Hoylande D., and Van Schaak Bros. Chemical Works, Inc., esters of [a8-dimethylamyl] alcohol (P.), B., 729.

Young, J. See Smith, S. W. J. Young, O. B. See Carman, A. P.

Young, P. See Willard, H. H.

Young, R. C., influence of structure on the breaking by heat of

Young, R. C., influence of structure on the breaking by heat of the carbon-oxygen linking in certain others, A., 1174.

Young, T. F. See Harkins, W. D.

Young, W. G., Dillon, R. T., and Lucas, H. J., synthesis of isomeric \( \mathcal{B}\)-butenes, A., 1163.

Young, W. G. See also Dillon, R. T., and Lucas, H. J. Younkins, J. A. See Davis, J. D. Youse, L. K. See Lange, N. A.

Yovanovitch, D.K.,  $\gamma$ -rays and the evolution of heat from radium and mesotherium, A., 116.

Yu, N., cold-hæmagglutinin, A., 1328.

Yuill, J. L., alcoholic fermentation by Aspergillus flavus, Brefeld, A., 108.

Yuill, J. L. See also Fernbach, A.

Yumoto, K., spark ignition of hydrogen-air mixture, A., 403. Yumoto, K. See also Terada, T.

Yunck, J. A., leading-in wires for evacuated [glass] containers,

(P.), B., 176. Yungblut, G., and Richardson Co., making metallic sheets by electroplating, (P.), B., 290.

Zaar, B., condensation of aliphatic aldehydes with malonic acid and formation of new a\beta-unsaturated fatty acids, A., 1275. new homologues of crotonaldehyde, A., 1275.

Zablinsky, K. See Spengler, O. Zach, C., conversion of dibenzylidenesorbitol into sorbitol hexa-

acetate, B., 619.

Zacharias, chemistry of "tiles," and the plastic state, A., 1004. Zachariasen, W., crystal structure of the soluble modification of germanium dioxide, A., 18.

crystal structure of bixbyite and artificial manganese sesquioxide, A., 126.

crystal structure of sesquioxides and compounds XYO3, A., 1131. Zacherl, M. K. See Schmid, L.

Zade, A., determination of sugar and dry matter in root crops, B., 143.

**Zadoc-Kahn**, (Mlle.) J., refractive indices of a mesomorphic substance in the solid state, A., 121.

Zafouk, V., dissociation constant of glutimic acid, A., 765. inversion of sucrose by weak acids, B., 33.

Zahl, H. A. See Ellett, A. Zahlová, (Mlle.) L. See Frejka, J. Zahn, C. W. See Kist, H. J.

Zahn, H., conductivity of strong electrolytes for high-frequency currents, A., 512.

Zahn, H. Sco also Hellemann, H., and Rieckhoff, H.

Zahn, K. See Grasselli Dyestuff Corporation.

Zahner & Schiess & Co. See Brandenberger, O.

Zahnley, J. W. See Latshaw, W. L.

Zahorka, A. See Skrabal, A.

Zaidan Höjln Rikagaku Kenkyujo, producing a liquid insecticide containing the effective ingredients of *Derris* species, (P.), B., 106.

manufacture of positive light-sensitive paper, (P.), B., 738. Zaidan Hojin Rikagaku Kenkyujo. See also Nagaoka, H., Takei, S., and Yabuta, T.

Zaikina, Z. M. See Pigulevski, G. V.

Zaitscheck, A. See Weiser, S. Zaitzev, N. A., indicators, A., 1029.

Zakharenko, A., distillation [of mazout] in a current of nitrogen,

B., 85. Zakharov, A. I., mechanism of the formation of 2:4-dinitro-phenol from benzene and nitric acid in presence of mercury salts as catalysts, A., 152.

manufacture of  $\beta$ -naphthol, B., 274.

Zakharov, I. P. See Shaposhnikov, V. N.

Zakowski, J., use of flat membranes for dialysis and for the determination of the osmotic pressures of colloidal solutions, A.,

Zalesinski, E., and Zulinski, R., heats of fusion and specific heats of calcium and magnesium, A., 386.

Zaleski, W., and Notkina, L., decomposition of hexoses in plants. IV. Stimulating effect of atmospheric oxygen on the postmortal alcoholic fermentation of peas, A., 1498.

 Zaleski, W., and Schatalowa-Zaleskaja, E., decomposition of hexoses in plants. III. Co-zymase of plants, A., 105.
 Zaljesov, G. See Marek, I.
 Zambonini, F., and Caglioti, V., spectroscopic determination of small quantities of strontium, barium, and casium in minerals, material material materials. rocks, mineral waters, etc., A., 415. manganimolybdates, A., 1156.

Zambonini, F., and Restaino, S., double sulphates of the rare-earth metals and the alkali metals. XII. Sulphates of cerium (cerous) and cæsium, A., 510.

Zaniroli, R., burner for liquid fuels, (P.), B., 425.

Zanoli, R., tuberculous pus, A., 842. Zapadinski, M. B., manufacture of ethylene chlorohydrin, B.,

Zappi, E. V., and Deulofeu, V., dichloromethylarsine, A., 178, 1286\*

Zappi, K. V., and Manini, (Mlle.) A., silver cacodylates, A., 546. Zaribnicky, F., proteolytic action of yeasts, A., 1491. Zavadovski, B., Raspopova, N., Rolitsch, T., and Umanova-

Zavadovskaja, E., rôle of the iodo-components in the thyroxine molecule, A., 851.

Zawidzki, J., and Zawidzki, J. G., kinetics of the hydrolytic decomposition of a-bromopropionie acid, A., 34, 888. Zawidzki, J. G. See Swientoslawski, W., and Zawidzki, J.

Zaykovsky, J., and Krasnokutska, A., mineral food of agricultural animals. II. Influence of calcium carbonate on the development of calves, A., 214.

Zbinden, C. Seo Dutoit, P. Zboray, B. See Stasiak, A.

Zchodro, N., change of conductivity of coloured substances during photochemical action, A., 523.

variation of the conductivity of coloured solutions during decolorisation, A., 652.

retarding action of heat on photochemical reactions of coloured solutions in benzene, A., 660.

Zdárský, J., determination of unsaturated hydrocarbons in benzine with bromine, B., 879. Zé, N. T. See Chalonge, D.

Zeche M. Stinnes. See Correll, A., and Weindel, A. Zeche de Wendel, Kugel, E., and Schwenk, H., production of valuable resin-like hydrocarbons, (P.), B., 588.

Zechmeister, L., and Rom, P., use of magnesium and methyl alcohol as reducing agent, A., 561. reduction of organic compounds, (P.), B., 11.

Zechmeister, L., and Tuzson, P., phytosterol of stinging nettle, A., 1113.

xanthophyll. II., A., 1306.

Zechmeister, L., and Vrabely, V., interpretation of the colorimetric hydrogenation curve of carotinoids, A., 1306.

Zechmeister, L. See also Willstätter, R. Zeckwer, I. T., and Nadler, J. E., hyperglycæmia associated with anaphylactic shock in the dog, A., 1096.

Zeeman, P. See Bakker, C. J. Zeh, L. See Grasselli Dyestuff Corporation.

Zehenter, J., Bohunck, H., and Novotny, E., m-hydroxytolylsulphones and m-cresolsulphonic acids, A., 692. Zehenter, J., and Gosch, F., mixed aromatic hydroxysulphones.

I. Hydroxyphenyl-p-hydroxytolylsulphone, A., 1440. Zeidler, G., and Toeldte, W., effect of light on paints containing

lead, B., 365.
Zeidler, G. See also Wolff, Hans.
Zeile, K. See Fischer, Hans.

Zeisberg, F. C. See Du Pont de Nemours & Co., E. I.

Zeise, H., influence of temperature on gas adsorption, A., 132. dispersity of dissolved cellulose, A., 505. adsorption of gases and vapours and the Langmuir theory, A., 1001.

Zeisset, W. See Abderhalden, E.

Zelssig, A., the Gram stain, A., 1110.

Zeitler, G. See Krafft, K.

Zeitler, G. A., vacuum evaporator, (P.), B., 801.

Zeitschel, F. O., isolation of alcohols or phenols from mixtures, (P.), B., 1008\*.

Zeitschel, O., l-difenchyl ether and l-difenchene, A., 1309.

Zeleny, J., distribution of mobilities of ions in moist air, A., 1122. Zelger, G. E., and Du Pont-Pathé Film Manufacturing Corporation, manufacture of plastic compounds, (P.), B., 242.

Zelikman, I. F. See Nakhmanovich, M. I.

Zelinski, N. D., and Balandin, A. A., kinetics of the catalytic dehydrogenation of decahydronaphthalene, A., 774.

Zelinski, N. D., and Jurjev, J. K., catalytic hydrogenation of 1-methylpyrrolo and dehydrogenation of 1-methylpyrrolidine, A., 1461.

Zelinski, N. D., and Lavrovski, K. P., waxes and boghead coals as

parents of petroleum. IV., B., 545. Zelinski, N. D., and Levina, R. J., irreversible catalysis of unsaturated cyclic hydrocarbons. VI. Contact transformations of nopinene, terpinene, and terpinolene, A., 450.

contact isomerisation of an aliphatic tetrahydroterpene, A.,

behaviour of saturated di- and tri-cyclic terpeno hydrocarbons towards catalytic reduction and dehydrogenation, A., 1457.

Zelinski, N. D., and Schuikin, N. I., spirocyclodceane and its contact isomerisation, A., 1287.

Zelinski, N. D., and Semiganovski, N. N., decomposition of cholesterylene and of cholesteryl ether by aluminium chloride, A., 1292.

optical activity of the hydrocarbons obtained by the decomposition of resin acids by aluminium chloride, A., 1293.

Zelinski, N. D., and Turova-Pollak, M. B., behaviour of cis- and trans-decahydronaphthalene towards bromine and aluminium bromide; isomerisation of hydrindane, A., 921.

Zell, R. Sec Frankenburger, W.

Zeller, T., preparation of fresh cacao beans, (P.), B., 1030. Zellmann, R., Lammering, D., and Chem. Fabr. von Heyden, plant disinfectant and its manufacture, (P.), B., 617.

Zellmann, R. See also Le Blanc, M.

Zellner, J., comparative plant chemistry. XXI. Chemistry of latex-bearing plants. IV., A., 106.
Zellner, J. See also Fröschl, N., and Hartmann, E.

Zellstoff-fabrik Waldhof, and Haas, R., regulating the [consistency of pulps by the concentration of liquids, (P.), B., 79.

Zellstoff-fabrik Waldhof, and Schneider, Adolf, apparatus for the concentration of liquids, (P.), B., 40.

Zellstoff-fabrik Waldhof. See also Clemm, H., and Hangleiter, C. Zemansky, M. W., radii and collision probabilities of metastable neon and mercury atoms, A., 1122.

Zemplén, G., syntheses in the carbohydrate group with the aid of sublimed ferric chloride. I. Preparation of biosides of the a-series, A., 683.

action of metallic aluminium and mercury salts on acetohalogeno-sugars. I. Syntheses of a-biosides, A., 683.

Zemplén, G., and Bruckner, Z., action of trimethylamine and other bases on acetobromocellobiose, A., 174.

Zemplén, G., and Csürös, Z., fission of β-glucosan with titanium tetrachloride, A., 682.

action of nitrosyl bromido on amino-acids, A., 1283

Zemplén, G., Csürős, Z., Gerecs, A., and Acsél, S., phloridzin and quercitrin, A., 174.

Zemplén, G., and Gerecs, A., constitution of solanine, A., 51. synthesis of sucrose, A., 683.

Zemplen, G., and Müller, Alexander, alizaringlucoside and alizarinbiosides, A., 1281.

Zemplén, G., and Pacsu, E., hydrolysis of acetylated sugars and similar substances, A., 911.

Zener, C., rotational distortion and Zeeman effect of diatomic molecules in wave mechanics, A., 1360.

Zener, C., and Guillemin, V., jun., B-state of the hydrogen molecule, A., 1360. Zener, C. Sce also Guillemin, V., jun., and Kemble, E. C.

Zenkovich, V. B. See Rodionov, V. M.

Zentgraf,  $M_{\cdot \cdot}$ , ion rays,  $A_{\cdot \cdot}$ , 970.

Zerban, F. W., Gamble, C. A., and Hardin, G. H., verification of the 100° point of the Ventzke sugar scale. II., B., 336.

Zerbe, C. See Spilker, A. L. II. Zerner, E., and Goldhammer, H., a-hydroxydiphenylacetaldehyde, A., 1450.

Zernik, F., [colourless] light filter [for ultra-violet rays], (P.),

Zervas, L. See Bergmann, M.

Zerweck, W. Seo Grasselli Dyestuff Corporation.

Zessevitsch, V., and Nikonov, V., emission lines in the spectrum of the solar corona, A., 731.

Zeyen, K. L. See Bardenheuer, P.

Zhadin, V. V., Ulyashchenko, E. P., and Astafiev, V. I., manufacture of bleaching earths from clays, B., 918.

Zherdeva, L. G. See Sachanov, A. N. Zickmann, P. See Rassow, B. Zieger, K. See Kirpal, A. K. Ziegler, E. E. See Rosenthal, S. M.

Ziegler, K., and Bähr, K., bromination of as-diphenyldimethylethylene, A., 1054.

Ziegler, K., Colonius, H., and Schäfer, O., organo-alkali compounds. II. Schlenk's addition of alkali metals to unsaturated hydrocarbons, A., 1091.

Ziegler, K., and Crossmann, F., supposed "ring-inclination isomerism" with derivatives of indene, A., 1054.

Ziegler, K., Crössmann, F., Kleiner, H., and Schäfer, O., organo-alkali compounds. I. Reaction between unsaturated hydrocarbons and alkali metal alkyls, A., 1091.

Ziegler, K., and Dersch, F., possible, ready replacement of the Zerewitinov method, A., 1029.

Ziegler, K., and Ditzel, F., tervalent carbon. VIII. Molecular

volume of hexaphenylethane and analogues, A., 1010.

Ziegler, K., and Ewald, L., tervalent carbon. VII. Accurate determination of dissociation equilibrium; determination of heat of dissociation of hexaphenylethane, A., 1010.

Ziegler, K., and Kleiner, H., organo-alkali compounds. III. Polymerisation of unsaturated hydrocarbons under the influence of alkali metals and alkali metal alkyls, A., 1091.

Ziegler, M. R. See Schultz, F. W.

Ziegler, N. A., analysis of carbon in iron and iron alloys, B., 854. Zieler, W., tungsten steel, B., 752.

Zieler, W. See also Pölzguter, F. Zielstorff, W., Keller, A., and Beutler, W., manurial trials with town sewage in 1928, B., 992.

Ziemecki, S., excitation of solid bodies by slow-speed electrons, A., 238. Zieminski, S., electrodialytic demineralisation of sucrose solu-

tions, B., 906.

Ziemke, E., passage of arsenic through the placental metabolism, A., 1486.

Zieren, M. See Aten, A. H. W. Zierer, A. See Winkler, G.

Zih, A., hæmopoietic action of various organs, A., 467.

Zih, A. See also Verzar, F. Zijl, J. P. van, routine mechanical analysis of soils by the Robinson method, B., 926.

Zikesch, H. See Büttner-Werke A.-G. Zilberg, I. G. See Magidson, O. Y.

Zilg, H. See Rosenheim, A.

Zillgen, M., economics of modern dry-cleaning processes for blastfurnace gas, B., 981.

Zilva, S. S. See Shipp, H. L. Zimmerley, S. R. See Gaudin, A. M.

Zimmerli, A., and Rhodia Chem. Co., manufacture of benzyl phthalato, (P.), B., 772. Zimmerman, C. D., apparatus for gas analysis, (P.), B., 769.

Zimmermann, A. See Moldenhauer, W.

Zimmermann, B., drying of beet slices and its influence on sugar content, B., 789.

See also Sandera, K.

Zimmermann, B. Zimmermann, F. See Asher, L.

Zimmermann, J., separation of citronellal from essential oils, B., 536.

determination of total geraniol in citronella oil, B., 698. Zimmermann, L., and Esser, H., specific volume of white pig iron, B., 599.

Zimmermann, W. See Posner, T., Reihlen, H., and Stock, A. Zingg, E., Oberhoffer, P., and Pivovarsky, E., influence of the method of manufacture and the annealing atmosphere on the

surface structure of tool steels, B., 600. Zinke, A., and Bensa, F., manufacture of vat dyes of the iso-

dibenzanthrone series, (P.), B., 891\*. condensing organic [perylene] compounds by means of aluminium chloride, (P.), B., 1008\*.

Zinke, A., Dadieu, A., Funke, K., and Pongratz, A., perylene and its derivatives. XVII., A., 56.

Zinke, A., Funke, K., and Bensa, F., manufacture of highlychlorinated perylenes, (P.), B., 550\*.

Zinke, A., and Hirsch, W. [with Kolmayr, H.], perylene and its derivatives. XXV., A., 931.

Zinke, A., Hirsch, W., and Brozek, E., perylene and its derivatives. XIX., A., 568.

Zinke, A., and Kolmayr, H., perylene and its derivatives. XXVI., A., 1453.

Zinke, A., and Schniderschitsch, N., perylene and its derivatives. XXII., A., 803.

Zinke, A. See also Pongratz, A. Zinn, R. E., air separator for the laboratory, A., 672. Zinn, W. H. See Robertson, J. K.

Zintl, E., salt-like compounds of sodium and their change into intermetallic phases, A., 1249.

Zipi, K., muscle poisons causing contraction. I. Novocaine antagonism, A., 601.

Zirkle, C., effect of hydrogen-ion concentration on the fixation image of various salts of chromium [in plants], A., 362.

Zirm, K. See Haurowitz, F. Zisch, W. See Deuts. Gold- & Silber-Scheideanstalt vorm. Roessler.

Zitscher, A., Seidenfaden, W., and General Aniline Works, Inc., [manufacture of] nitrosoamine-alkali salts of halogenated and methyl-substituted amines, (P.), B., 809\*.

Zitscher, A. See also Grasselli Dyestuff Corporation, and I. G. Farbenind. A.-G.

Zmaczynski, A., modification of [Swienteslawski's] ebullioscope

for high pressures, A., 418.

Zobell, C. E. See Greaves, J. E.

Zocher, H. [with Fischer, H. J., von], optical anisotropy of strotched rubber, B., 827.

Zocher, H., and Birstein, V., mesophases. I. Nature of mesophases, A., 870.

mesophases. II. Relative orientation of volume elements of a III. Aqueous mesophase of salvarsan, A., mesophase. 876.

phases. IV. Further examples of aqueous mesophases. V. Influence of electric and magnetic fields, A., 1013. mesophases.

Zocher, H., and Coper, K., influence of photographic reactions on the Weigert effect in photochloride, A., 154, 660.

Zocher, H., and Jacobsohn, K., tactosols, A., 505.

Zocher, H. See also Albu, H. W., Bradfield, R., and Freudenberg, K.

Zoeller, E. Sco Hentschel, H.

Zoellner, E. A. See Gilman, H.

Zogline, I. See Potozky, A. Zohner, K. See Karrer, P.

Zólciński, J., sunlight and chemical nitrification, A., 109. Zolina, V. See Fréedericksz, V. Zollicker, E. See De Montmollin, M.

Zorzi, M. See Philippi, E.

Zotos, G., means [rotary furnace] for melting glass, silicates, and like mineral substances, (P.), B., 776.

Zschimmer, E., calculation of glass constants on the basis of recent investigation, B., 246.

Zschimmer, E., velocity of crystallisation of soda-lime-silica glasses, B., 472.

Zschocke, H., apparatus [travelling hammer device] for cleaning the electrodes in electrical gas-purifying plants, (P.), B., 824. Zsigmondy, R., ultra-microscope and colloidal solutions, A., 26. structures of clear sodium oleate gels and number of nuclei in these gels, A., 260.

Zucker, T. F., and Kesten, H. D., saponin hæmolysis of reticulocyte-containing blood, A., 344.

Zucker, T. F. See also Kesten, H. D.

Zuckerstein, E., and Streicher, A., offect of insulin on the properties of the blood in diabetes mellitus, A., 1100.

Zuckerstein, E. See also Pincussen, L. Zuelzer, G., heart hormone, A., 1495.

Zütphen, L. van. See Schirmacher, K.

Zukervanik, J., oil from Carthamus tinctoris (safflower oil), B., 402. 

Zulinski, R. See Zalesinski, E.

Zuravlev, S. See Kubelka, V. Zuverkalov, D., Goldberg, I., and Silberstein, A., biochemistry of experimental rabies in rabbits, A., 1482.

Zvenigorodskaya, V. M. See Kazarnevski, I. A. Zvjaginstsev, O. E., capacity of certain saturated complex com-

pounds for further combination, A., 1146. Zvjaginstsev, O. E. See also Ipatiev, V. N.

Zwaan, A., intensity calculations for the partial Paschen-Back effect, A., 3.

transition probabilities in the Ca II spectrum, A., 365. intensities in the calcium spark spectrum, A., 965.

Zwaardemaker, H., conversion of vitamin-B into automatin by activation through irradiation, A., 104.

Zweifel, F. See Kehrmann, F.

Zweig, C., and Standard Oil Co., removal of petrolatum from oils, (P.), B., 234. Zwerina, K. See Faltis, F.

Zwicker, importance of the method of sampling for the analysis of alloys, B., 753.
Zwioky, F., imperfections of crystals, A., 630.

Zwicky, F. See also Evien, H. M. Zwikker, C., specific heat of tungsten between 90° and 2600° Abs., A., 386.

vapour pressure at high temperatures, A., 636.

influence of surface layers on the electron emission from glowing metals, A., 1212.

Zwikker, C., and Schmidt, G., specific heat of tungsten between 90° and 2600° Abs., A., 1137.

Zwikker, C. See also De Boer, J. H., and Sizoo, G. J. Zwikker, J. J. L., structure of narceine, A., 832.

an impurity in commercial narceine, which gives the colour reaction with sodium nitroprusside, B., 796.

Zwilling, A. See Glassmann,  $\hat{B}$ . Zworykin, V., and Wilson, E. D., cæsium-magnesium photo-cell, A., 1262.

Zworykin, V. See also Westinghouse Electric & Manuf. Co. Zyvotinski, P. B. See Plotnikov, V. A.